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System Paradigm as a Theoretical Basis for Strategic Economic Management in Modern Conditions

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ABSTRACT

In the context of the turbulence of the global and national economy and the growing complexity of the interaction of the Russian economy with the Western world, it is necessary to expand the scope and improve the efficiency of organizations' strategic management at all levels of the economy. Theoretical substantiation of strategic management, its connection with the theory of organization, the theory of the firm, the theory of industrial development and other theories also taking into account the specifics of the Russian economy are not sufficiently developed. In this regard, the formation of a theoretical and methodological basis for the development and implementation of strategic management of the domestic economy is of particular relevance. The article substantiates the expediency of using the system paradigm as a theoretical and ideological basis for developing goals, methods and means of strategic management of organizations. The essence of the system paradigm is revealed as a set of systemic methods of perception, cognition and transformation of the economy, including economic theory, economic practice, economic policy and economic management. The role of strategic management as a foundation and source of co-evolutionary development of the economic planning system, including strategic, calendar and operational management, is shown. The necessity and development of new types of strategic management based on the subject area's non-quantitative (qualitative) target characteristics and focused on managing the organization's value, spiritual and intellectual spheres are substantiated. As a new component of the theoretical basis of strategic management, the theory of systems' spiral evolution is put forward, synthesizing the concept of linear sequential development of the system. According to this approach, the system is viewed as a change in the dominant value orientations and the concept of cyclic development of the system as the alternation of four phases of the dominance of the object, environment, process and project system's complexes. The **theoretical significance** of the presented developments is associated with the evolution and deepening of a systems approach in economic research. The **practical value** lies in substantiating the feasibility of expanding the scope of strategic management using systemic tools to improve the efficiency and coordination of management at all levels of the economy.

Keywords: system paradigm; system worldview; strategic management; planning; theory of spiral evolution; systems analysis; social leadership; economic system

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INTRODUCTION

The term "systems paradigm" emerged in the economic literature during the 1990s, a time characterized by the transformation of economic structures in socialist countries and shifts in the geopolitical structure of the world economy [1, 2]. The initiation of the new concept had three main objectives. Firstly, it aimed to capture the complexity and heterogeneity of emerging economic phenomena during that period. Secondly, it sought to bring clarity and structure to the concepts of descriptive economic theories. Lastly, it

aimed to systematize a set of economic regulatory tools suitable for managing turbulent conditions. The application of the systems paradigm also provided resolution to classical antitheses such as "part-whole," "element-system," "individual-collective," and more. The foundational principles of the systems paradigm, initially mentioned in J. Kornai's groundbreaking publication [1], have been extensively discussed, refined, and expanded upon in subsequent works [3–8].

Currently, there is an active development of the theoretical basis of the systems paradigm and

its expanding application in various management fields such as strategic planning, management, systems engineering, enterprise restructuring, ecosystem formation, and more [9, 10]. However, it is crucial to address key challenges related to improving the adequacy of the systems paradigm as a theoretical framework and enhancing the effectiveness of systems regulation methods, as discussed in [11]. Since the publication of that work, both the domestic and global economy have undergone significant changes, characterized by radical shifts. The world is once again facing turbulence and uncertainty. Given this context, a valid question arises: Is it appropriate to apply the systems paradigm in economic research, economic policy formulation, and decision-making in such a period of instability?

This article provides a clear and affirmative answer to the question, demonstrating that the utilization of recently developed systemic concepts, combined with practical experience in solving economic regulation challenges, establishes a robust and reliable foundation for extending the systems paradigm beyond the realm of economic theory. This extension encompasses economic policy, economic management, and economic practice. The integration of the systems worldview into various sectors of the economy, coupled with the principles of strategic management, has the potential to enhance efficiency, reduce unproductive costs, and proactively prevent or mitigate the impact of crises on the country's socio-economic development in the medium and long term. The system paradigm, in turn, draws upon the systemic economic worldview and system economic theory, which serve as integrators of diverse trends such as neoclassical economics, institutionalism, and evolutionary theory. Together, this scientific and methodological framework, comprising the systems worldview, the systems paradigm, and system strategic management, should form the

cornerstone for economic regulation in modern conditions.

THE SYSTEM PARADIGM IN ECONOMIC THEORY, MANAGEMENT, AND ECONOMIC PRACTICE

It is widely recognized that the economy is a complex and multifaceted phenomenon, encompassing various layers and dimensions. Every participant engaged in economic activities, whether directly or indirectly, interacts with specific economic entities. They acquire information regarding prices, attributes of goods and services, economic conditions, management strategies for different projects, and more. These economic agents also hold certain, albeit sometimes ambiguous, notions about the interdependent effects of certain economic processes or decisions on others. Nevertheless, a considerable portion of the economy eludes an agent's direct sensory, informational, or analytical perception, regardless of whether they are individuals, legal entities, or government institutions. Through a synthesis of the information accessible regarding the visible aspects of economic functioning and contemplative interpretations of the invisible facets, agents construct their worldview. It is within this framework that they make behavioral or managerial decisions, engage in transactions, formulate plans, and develop assessments. It is important to note that agents' social and economic experiences, psychological profiles, personal preferences, and perspectives on various aspects of economic reality are inherently distinct and individualistic.

In addition to the subjective nature of perceiving the economy, it is essential to consider the beliefs regarding the regularity or uniqueness of certain developmental processes within it [12, 13]. The reliance on regularity corresponds to the perspective that the economy evolves continuously, both as a whole and in relatively autonomous fragments. Conversely,

the concept of singularity emphasizes discrete disruptions in time and/or space. Depending on the chosen worldview, favoring either regularity or singularity, economic agents formulate plans and engage in activities, defining their goals and time horizons. As decision-makers or principals, they also shape the managerial attitudes of individuals under their administrative supervision. Achieving reconciliation and harmonization among the aforementioned individual characteristics of economic perceptions is a complex socio-psychological objective, often addressed by specialists in fields such as information, communication, socio-political technologies, and more. The adequacy and balance of individual elements within the economic worldview are crucial factors for societal governability and the purposefulness of its progress. The activation of this factor depends on numerous components, with economic theory playing a significant role in it. As highlighted by J. Keynes, familiarity with economic theory is prevalent among nearly every participant in economic activities, regardless of whether they are subjects or objects of management. He noted that even those who claim to be immune to intellectual influences are typically influenced by the ideas of past economists [14]. The list of relatively independent fragments of the space of economic theory is very broad due to differences in the subject area, underlying assumptions and prerequisites, goals and results of application. The grouping of these theories by premises and methodology leads to the notion of a paradigm and a paradigmatic structure of economic theory [15–20].

The principles of the system paradigm were initially formulated in [1, 3]. The key principles are as follows:

- 1) The study of the system as a whole, focusing on the relationships between the system and its constituent parts;
- 2) The research conducted within the system paradigm is comprehensive and does not confine

itself to any specific discipline such as economics, sociology, or political science;

- 3) attention of researchers is focused on permanent institutions (whose functioning period is not limited) rather than on individual events and processes;

- 4) a researcher gives historical explanation to events and processes (establishment of their cause-and-effect relations);

- 5) individual preferences are considered as products of the system (when system changes — preferences change as well);

- 6) researchers focus their attention on meaningful changes occurring in systems, deep transformations of one system into another;

- 7) each system has its own specific and unique internal defects;

- 8) a property of one system is explained by comparing it with a similar property of another system. Thus, comparison is the most typical method used within the system paradigm.

The systemic approach is motivated by the necessity for:

- a higher level of generalization (abstraction) compared to neoclassical economics;

- a system of categories, satisfying the additivity requirements concerning the main objects of analysis with respect to the operation of alliance (combination). Traditional economic theory does not consider an alliance of agents as an agent, a combination of prices as a price, a combination of shares as a share, and so on. However, in systems economics, the union of systems is regarded as a system, the combination of objects as an object, the combination of projects as a project, the combination of processes as a process, and the combination of communities as a community.;

- A unified theory that transcends the limitations of traditional schools such as neoclassical, institutional, and evolutionary economics. This implies overcoming the “splitting” between macro- and micro-levels observed in neoclassical economics, addressing

the absence of a widely accepted theory of institutional dynamics in the institutional school (with a predominant focus on horizontal interactions at the expense of vertical ones in time); and balancing the emphasis on vertical inter-periodic interactions over horizontal spatial linkages in evolutionary economics.

In the systems paradigm, the subject area of research and management is conceptualized as a population of interacting and evolving socio-economic systems.

Currently, In orthodox economic theory, three primary paradigms are widely recognized, each offering distinct perspectives on the underlying driving forces of economic development:: *Neoclassical Paradigm* posits that the driving forces behind economic development are the behaviors of individual economic agents striving to enhance their well-being.; *Institutional Paradigm*, according to it, social and economic institutions play a pivotal role in shaping economic activity and development.; *Evolutionary paradigm*, stating that, the driving force behind economic development is attributed to the process of adaptation by the population of economic agents to changing economic conditions, while retaining genetic invariants of its behavioral decision-making mechanisms.

In the last quarter of the century, the system paradigm has gained prominence and is now considered on par with the neoclassical, institutional, and evolutionary paradigms in economic theory. Within the system paradigm, economic objects, socio-economic processes, economic environments (including institutions), and innovative projects (such as technological advancements and production organization) are all viewed as different types of economic systems. These economic systems are recognized as the fundamental units of analysis. The economic system is defined as a relatively stable grouping of economic objects, processes, projects, and environments, exhibiting characteristics of both external integrity and internal diversity.

Dynamics here arises as a result of interaction, transformation and reorganization of such systems. Thus, the system paradigm integrates the main features of neoclassical (object), institutional (environment) and evolutionary (process-genetic) paradigms.

The paradigms in economics differ significantly in terms of their understanding of the “regularity-singularity” relationship. In the neoclassical framework, singularity can arise from the combination of trajectories of multiple functioning agents. Just as the simultaneous accumulation of passengers on one side of a boat can cause it to capsize, the accidental combination of unfavorable developments among autonomous agents can lead to economic collapse and disrupt regularity. In institutional economics, the chances of spontaneous disruptions to regularity are considered low due to the tightly interwoven structure of institutions in society. Changes in specific elements are damped by their interrelation with others. However, the growth of contradictions within the institutional sphere can bring about revolutionary shifts, the dominance of certain institutions, and the disavowal or repudiation of others. Under the evolutionary paradigm, singularity is unlikely to occur due to the law of conservation of genetic foundations underlying the decision-making of economic agents. In the systems paradigm, the concept of a “singularity point” is incorporated within a system, where it automatically reemerges as a “regularity point.” This paradigm emphasizes the interconnectedness of planning settings in both space and time. In economic policy, it means that regional economic decisions should be linked by a common strategic framework throughout a country. Temporally, the application of the system paradigm entails the continuity of decisions and the ability to access information about those ones that made in medium- and long- term. . The system paradigm emphasizes the need for coordination in various aspects

of economic management. Firstly, in relation to specific management methods, there is a requirement for the coordination of decisions over the short- and medium-term periods. Additionally, coordination is necessary across different spheres of socio-economic space. At the level of economic practice, the system paradigm calls for the coordination of norms, standards, regulations, and prescriptions. These guidelines serve as the framework for economic activities and ensure that they contribute to the development of the country's economy as a single national economic complex (see figure). In general, the implementation of this paradigm involves a high degree of coordination of all four basic types of economic systems: objects, projects, processes and environments.

One of the key objectives of management when employing the systems paradigm is to identify and classify systems within the subject area as relatively stable and holistic entities that can be effectively managed using systematic methods. It is important to differentiate these entities from non-systems, which are unstable groups of objects and processes, as well as from pre-systems, which are temporary groups that have the potential for purposeful transformation into systems.

The extension and application of the system paradigm to the entire domestic economy necessitates comprehensive solutions and entails a fundamental restructuring of the four key national subsystems: the innovation system, the standards system, the statistical system, and the planning system. This process requires a delicate balance between market mechanisms, administrative mechanisms, and cognitive functioning mechanisms to prevent conflicts of interest among individual, group, regional, and departmental stakeholders. Within these subsystems, the national planning system, with the strategic planning system as its core, should assume a central role in coordinating and guiding the overall economic direction.

A SYSTEMS WORLDVIEW AND STRATEGIC MANAGEMENT

According to classical concepts, originating from A. Fayol, management encompasses planning, organizing, directing, coordination, and control [21]. Strategic management, on the other hand, distinguishes itself from general management by focusing on making strategic decisions of high importance, both in the present and the future, which are irreversible in nature within the aforementioned areas. Consequently, the necessary components of strategic management include the following: strategic planning, structural organization of the management subject area, formulation and implementation of strategic directives, and a system of coordinating and interacting mechanisms among independent management objects. A specific aspect of strategic management is strategic control, which involves analyzing the implementation of strategic plans, as well as making organizational and functional strategic decisions.

Within the structure of general management, strategic management serves as the foundation upon which other types of planning are built, including tactical, operational, and calendar planning. These various planning types are integrated into a cohesive system. The construction of this system would not be possible without the dissemination and coordination among participants in economic and managerial activities, guided by a systems worldview that emerges from the organic synthesis of the general economic worldview and the system paradigm. Through the lens of such a worldview, which is applied to theory, policy, management, and economic practice, a unified understanding of the economy as a holistic subsystem of society is formed. In this context, the strategic approach closely aligns with the systems approach, as it takes into account all significant aggregate factors of both spatial and temporal nature. The systems worldview is implemented by conceptualizing

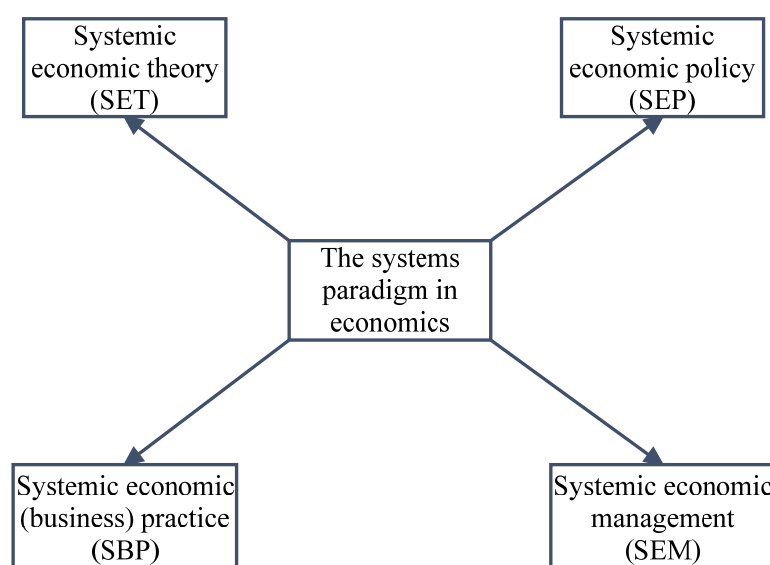


Fig. The impact of the systems paradigm on the basic components of the economy

Source: compiled by the author.

economics as a population of economic systems that vary in scale, structure and functions and are deployed and interact within different areas of the space-time continuum. In this case the properties and the features of socio-economic space are determined by the characteristics of these economic systems and, in turn, determine the characteristics of the systems placed in it. In the systems worldview, the hierarchy of scales of economic strata, ranging from macro- to meso-, micro-, and nano-levels, does not imply a unidirectional influence of the upper levels on the lower ones. Unlike traditional hierarchical perspectives, the systems worldview treats these strata as being somewhat equal in significance. Consequently, there is a combined influence that occurs both from the “top down” and from the “bottom up”. Socio-economic space is assumed to be isotropic both vertically and horizontally. This property can be described as “the principle of spatial isotropy”. Within the framework of the systems worldview, it is necessary to note another principle — the anthropic principle. According to this principle, the study of economic phenomena is conducted from the perspective of an observer. In the context of socio-humanitarian studies, this

observer is often referred to as the social observer. The social observer is capable of perceiving the system’s internal state as well as its external position. The anthropic principle, within the systems worldview, allows for the reconciliation of the objective content of the surrounding reality with subjective perception, thus ensuring the unity of an individual’s internal spiritual realm. of an individual [22, 23]. The combination of isotropic and anthropic principles brings us close to Vernadsky’s concept of the biosphere. Vernadsky proposed that the properties of socio-economic space are not only determined by non-living elements such as economic goods but also by social elements (organizations) and living beings (humans). In the context of the economy, *nanoeconomics* is highlighted as a crucial layer that is significantly influenced by human actions. The systemic worldview allows us to encompass all the components and aspects of economic space that are essential for economic activities.

The role of strategic management extends beyond its foundational functions. It serves as the fundamental framework that establishes the organic connection between all types of planning and the strategic management derived

from such planning. In the current turbulent socio-economic environment, both at the global and national levels, strategic directions rooted in systemic strategic planning should permeate all levels and directions of an organization, becoming its distinctive ideology.

In reality, a strategic systems worldview should be expanded to encompass all participants and organizers of economic activity at the national level. This requires a significant reconstruction of the existing economic mindset held by the population, which was developed in response to the transition towards a market economy in the late 1980s. The prevailing economic outlook was characterized by a short-term planning horizon and a narrow spatial focus limited to the well-being of a small group consisting of individuals and their immediate relatives or friends. This localized worldview was typical of an “economy of individuals” mindset [24]. As time progressed, the scope of an individual’s economic worldview, particularly its peripheral aspects, expanded to include the managers of the company where they were employed. However, it was relatively uncommon for this circle to encompass the entire enterprise to which the individual was closely affiliated. In contrast, a systemic worldview emphasizes an orientation towards achieving success not only for a specific company but also for an entire network of interconnected enterprises and economic systems and a strategic systemic worldview goes a step further by extending this orientation beyond immediate considerations and encompassing the medium and long-term objectives.

In the context of strategic management, the focus shifts from an individual organization to a relatively stable group of organizations known as a bounded ecosystem. This concept differs from a conventional ecosystem in that the composition of the latter is typically uncertain and unstable, while a bounded ecosystem consists of organizations with a defined membership and a

deliberate delegation of strategic management responsibilities to a specialized management center.

FEATURES AND DIRECTIONS OF STRATEGIC MANAGEMENT DEVELOPMENT

A characteristic feature of strategic management is the perception of an organization as a holistic system that develops in time and space. This approach to management integrates the space-time, program-targeted, and forecast-analytical perspectives. Strategic planning distinguishes itself from long-term and medium-term planning by employing a scenario-based approach to understand and describe both the internal and external environment of the organization.

A scenario in strategic management provides a comprehensive view of how an economic system functions within a specific context. It aims to capture the key factors and dynamics that influence the organization’s operations without considering the involvement of new factors or unknown elements that may emerge during the scenario’s timeframe. The strategic plan, based on the scenario, is designed to be “closed” in the sense that it encompasses a complete list and hierarchy of factors that affect the company’s operations within the planning period. This requirement imposes limits on the planning horizon, aligning it with the time span covered by the scenario. It’s important to note that the strategic development horizon is not predetermined by a fixed planning period (e.g., three years, five years, etc.), but rather by the occurrence of “strategic events”, i.e. significant changes in the external circumstances or internal environment of the organization that go beyond what was considered in the initial scenario and requires an adjustment in the organization’s strategy. Overall, the strategy of an enterprise consolidates the influence of its diverse internal and external forces, the initial and final conditions of the planning period; the target setting; resource capabilities and capacities.

Strategic management, in contrast to general management, follows a phased approach due to the limited validity period of an organization's strategy. The strategy of an organization is not meant to be static and requires periodic review and adjustments. While the revision of the strategy may disrupt the continuity of strategic management, it does maintain continuity of the underlying principles of general management.

A complete shift in the management paradigm is possible when there is a significant disruption to the identity of the organization. This can occur when there are substantial changes in the organization's mission in market conditions, corporate environment, or regulatory environment. In such cases, a fundamental change in the management approach may be warranted to address the new challenges and opportunities. Strategic planning, as part of strategic management, differs from adaptive planning, which is based on reactive behavior of the organization.

Strategic management, based on strategic planning and forecasting, is expected to play a crucial role in the 21st century. This shift is driven by a combination of objective and subjective factors that have significant implications for the business landscape.

Objective factors contributing to the prominence of strategic management include the development of the network economy, the production of complex knowledge-intensive products with long lead times, increased density and transparency of the economic environment, the development of ICT (information and communications technology), acceleration of STP (scientific and technological progress), etc. On the subjective side, the emergence of a new generation of managers who have been exposed to strategic management as part of their higher education programs, the adoption of legislation and regulations mandating the development of strategies, the decentralization of strategic decision-making centers outside the traditional

boundaries of the enterprise have contributed to the prominence of strategic management.

It is expected that the spatial and temporal boundaries of strategic management will expand beyond the traditional scope of individual companies and firms. . Instead, a broader concept of an ecosystem will emerge as the focal point. This ecosystem can be defined as a spatially localized complex comprising a diverse range of organizations, interconnected business processes, innovation projects, and supporting infrastructure systems, that interact dynamically to create and circulate both tangible and intangible goods and values and possess the ability to operate independently over the long term, sustained by the continuous circulation of these goods and systems [25]. The primary objective of ecosystem strategic management is to achieve an optimal balance between the influence of individual participants, investment projects, and logistical processes within a favorable intercompany environment. This entails making decisions that aim to "equalize" the opportunities of different components within the ecosystem to influence the overall ecosystem strategy. To accomplish this, a substantial portion of management efforts will be focused on developing cooperative relationships both within individual firms and across the ecosystem [26].

The adoption of the systems paradigm within modern strategic management necessitates the expansion of its conceptual tools. Among them are:

1. *Reference management.* This type of management is based on qualitative characteristics or references/benchmarks of the organization's future state, market position, and business environment. Reference management involves the formulation and implementation of a reference-oriented strategy for the organization. The development of reference-oriented management aligns with the broader expansion of the strategic management toolkit, particularly in incorporating resources with a

qualitative dimension. These resources include human, social, institutional, and intellectual capitals, among others [27].

In the context of reference-oriented management, an inspirational leader within the organization takes responsibility for organizing and implementing this approach.

2. *Animalistic management*, as an extension of the systems paradigm and strategic management, acknowledges the presence of an integrating component within the managed entity. This component serves as a coordination mechanism for various areas of activity. By conceptualizing the organization as a sphere where material, spiritual, cognitive, and creative processes interact (ontology, ideology, gnoseology, praxeology), we refer to the “soul” of the economic system. This “soul” acts as the driving force that aligns intentions, actions, and the corresponding reactions of both the internal and external environment [28–30]. Depending on the characteristics of the enterprise, it may exhibit varying degrees of ambition in its market behavior, coherence between intentions and actions, and reasonable expectations regarding market reactions to its activities. These characteristics reflect the resonance or vibrance of the “soul” of the organization and the soul of its manager. The presence or absence of interaction between these elements can provide insights for predicting the effectiveness of the company under the leadership of a particular individual.

The main body of management literature offers numerous recommendations for managing various aspects of organizations. However, the topic of a single driving force that ensures the integrity and identity of a company is not widely explored within the managerial mainstream. Yet, in turbulent market and intra-company environments, there is a growing need to focus on managing the “soul” of the organization, often referred to as “animalistic management.”

In this context, strategic management should place significant emphasis on understanding

and nurturing the “soul” of the organization. Animalistic management involves not only recognizing the influence of the “soul” on the coordinated behavior of the enterprise, its units, and participants, but also fostering its development as a concentrated expression of the organization’s aggregated objectives and capabilities. The implementation of animalistic management is the responsibility of the spiritual leader of the organization.

3. *Intelligent management.*

The intelligent management style is built upon the recognition of the significant role played by intelligent workers in the modern economy. This approach suggests a new way of structuring the social space within a company, consisting of four distinct social fields: the field of influence of an intelligent leader, an inspirational leader, a cultural leader, and a spiritual leader [31]. The first social field, the field of influence of an intelligent leader, focuses on implementing the organization’s mission and defining the overall benefits it aims to produce; the intelligent leader manages the distribution of the tasks within the organization; the cultural leader oversees the third social field and is responsible for determining the technology and methods employed in the production and implementation of benefits within the organization;; the spiritual leader plays a vital role in defining the higher purpose and values of the organization, guiding its ethical and moral compass in socio-economic space. The advancement of information and computer technologies, along with the digitalization of the economy and the increasing emphasis on science and intelligence in production, has elevated the role of intelligent leadership within organizations. . It makes it possible to provide management reflection, i.e., to capture and to analyze data about the mutual dependence of the actions taken by thethe controlling and managed subsystems in the organization. The lack of such reflexivity could lead to stratification

of the workforce and ultimately reduces its effectiveness. As the overall intellectualization of economics progresses in the 21st century, the degree and depth of reflexivity in management will increase [32, 33]. This is especially important for strategic management which is highly sensitive to the gap between decisions being made and their implementation.

The main actor in the development of intellectual management of the organization should be its intelligent leader.

THE THEORY OF SPIRAL EVOLUTION OF ECONOMIC SYSTEMS AND STRATEGIC MANAGEMENT

The complex characteristics of the object of strategic management can be divided into two components: the internal state and the external position. The internal state refers to the organization's internal capabilities, resources, processes, and overall health. The external position, on the other hand, relates to the organization's position in the socio-economic space, including its market standing, competitive advantage, and relationships with other entities. While strategic management often tends to focus on the organization's external position, such as rankings, market share, or value chain positioning, the primary objective should be the qualitative improvement of the internal state. The internal state of an organization is fundamental to its long-term competitiveness, sustainable functioning in time and in space. (The choice between focusing on improving the internal state or improving the external position of an organization can be likened to the choice between "to be" and "to appear." Strategic management, as a comprehensive and long-term approach, should primarily be focused on "to be", while other types of planning should be focused on "to appear").

The internal form of the managerial object and its position in the external socio-economic environment are indeed closely interconnected. Their relationship can be characterized as dual,

as mentioned in [34]. While the external position of the object is influenced by numerous external factors that are difficult to control, the primary focus of strategic management should be on enhancing the internal content. Therefore, the transition to strategic management at all levels of the nation economy will not only improve the current economic performance but it will also — and this is the main goal — transfer enterprises to a higher level of functioning organization.

According to the spiral dynamics theory proposed by C. Graves, D. Beck, and C. Cowan [35–37], the development of a socio-economic system follows a pattern of directed change in the dominant value system within the object which shapes the perspectives, goals, and behaviors of the members within the organization, and this change occurs unidirectionally in an ascending line, leading from relatively simple systems to more complex ones. In [37, 38], the spiral dynamics theory describes eight value levels that represent the overall directional evolution of socio-economic systems. Development of these systems bears the imprint of the general dynamics of value stages: at a certain period of time, the managed object, having passed the preceding ones, stabilizes at a particular value level. A layering of parts (layers) reflecting the gradation of values from the simplest to the most acceptable is thus formed in the inner space of each system.

The aim of strategic management in developing an object or organization is indeed to guide it towards a better level of the value system compared to previous stages. However, it is important to consider the law of duality between the internal filling of the object and its external environment: as the object progresses to a higher value level, it is likely to experience corresponding changes in its external environment. However, the reverse influence also exists.

Traditionally, the different levels of the value system described in the spiral dynamics theory

are assigned specific colors to represent them. These colors serve as symbolic representations and aid in understanding the progression from lower levels to higher levels. The color scheme typically starts with beige, representing the lowest level, and ends with turquoise, representing the highest level [37, 38].

Each value level is associated with distinct characteristics and organizational models for managing the object or organization. These models can be analyzed in terms of the presence or absence of hierarchy in the organizational and managerial structure. Additionally, specific features of hierarchies, such as toughness and softness, rigidity and flexibility, stability and lability, can be used to meaningfully characterize the organizational model at each level.

According to the analysis presented in [39], the understanding of value systems and organizational functioning has evolved, leading to the identification of a new model called «pearlescent.» The pearlescent model is characterized by its ability to leverage additional resources necessary for improving a company's competitiveness and efficiency. In pearlescent enterprises, a high level of coordination is achieved through a combination of formal structures and informal institutions. These organizations exhibit a humanistic orientation in their management approach and effectively utilize digitalization in their production processes. The management style combines elements of hierarchical structures with participative democracy, promoting collaboration and engagement [40].

With the inclusion of the pearlescent model, the sequence of stages in the formation of socio-economic systems now encompasses nine levels, starting from beige and progressing to pearlescent. According to [41, 42], the development of the object and its transition from one value system to another is not a linear process but rather a cyclical one. This cyclical development is associated with changes in

leadership within a group of four fundamental subsystems: objective, environmental, process, and project.

During different periods, one of these subsystems may dominate, shaping the economic worldview of the organization's participants. The objective subsystem focuses on the role and position of the enterprise within the corporate community. The environmental subsystem emphasizes the internal climate and infrastructure of the organization. The process subsystem is concerned with the internal organizational procedures, including information, logistics, and regulations. The project worldview places emphasis on innovation and driving change within the organization. The cycle of changing leadership within an organization typically follows a sequence of phases: object — environment — process — project — object. At any given point in time, the dominant phase of the management cycle can serve as a powerful tool for aligning and mobilizing the enterprise staff to effectively address the current strategic management tasks.: The implementation of target management guidelines is greatly facilitated when they are built with consideration for the dominant worldview of the team in a given period.. Failure to consider and address the dominant worldview of the team in the target management guidelines can lead to resistance from participants, which can impede the successful implementation of the strategy.

In general, adopting a systemic paradigm that views the management object as an evolving economic system, progressing from basic value perceptions to complex value constructs, and experiencing cyclical changes in worldview types, enables the identification of realistic goals and appropriate means to address strategic management tasks.

CONCLUSION

1. Since the mid-2010s, there has been a growing trend in Russia to address the issue of

enhancing strategic management at all levels. This need becomes particularly pronounced on macro level during periods of crisis when effective management mechanisms are crucial but often found lacking. Therefore, ensuring the continuous preparedness of strategic management institutions has become a vital component of the country's economic security system.

2. The transition to strategic management of the economy would not be possible without a significant shift in the economic mindset of both participants and organizers of activities, i.e., the reorientation of its success criteria: from individualistic perspectives (focused on autonomous social and economic agents) towards more collective and holistic one (focused on local ecosystems representing relatively stable groups of functionally dependent and co-evolutionarily developing socio-economic units).

3. The systemic economic outlook, which is necessary for the comprehensive and multi-level implementation of strategic management, should be synthesized based on a system paradigm that encompasses economic theory, policy, management, and practice. Individualism, which was prominent as an ideology in the 1990s and early 2000s, needs to give way to collectivism in order to foster sustainable spatial and temporal development rooted in the principles of Environmental, Social, and Governance (ESG).

The arsenal of strategic management needs to be expanded by incorporating models of strategic regulation, namely orienting, animalistic, and intellectual management. Expanding and deepening the theoretical and methodological base of strategic management will also require changes in the structure and content of educational programs and courses for students and graduate students in economic specialties.

REFERENCES

1. Kornai J. The system paradigm. William Davidson Institute Working Papers Series. 1998;(278). URL: <https://deepblue.lib.umich.edu/bitstream/handle/2027.42/39662/wp278.pdf>
2. Van Rossem R. The world system paradigm as general theory of development: A cross-national test. *American Sociological Review*. 1996;61(3):508–527. DOI: 10.2307/2096362
3. Kornai J. System paradigm. *Voprosy ekonomiki*. 2002;(5):4–23. (In Russ.).
4. Kleiner G. System paradigm and enterprise theory. *Voprosy ekonomiki*. 2002;(10):47–69. (In Russ.).
5. Kleiner G. System economics as a platform for development of modern economic theory. *Voprosy ekonomiki*. 2013;(6):4–28. (In Russ.). DOI: 10.32609/0042–8736–2013–6–4–28
6. Dosi D. Innovation, organization and economic dynamics: Selected essays. Cheltenham: Edward Elgar; 2000. 500 p.
7. Midgley G. A systems theory of marginalization and its implications for systemic intervention. In: Systems analysis in economics — 2020. Proc. 6th Int. sci.-pract. conf.-biennale (Moscow, 09–11 December 2020). Moscow: Nauka; 2021:54–57. URL: https://systemeconomics.ru/wp-content/uploads/plenarysession-1_54–57.pdf (accessed on 10.10.2022). DOI: 10.33278/SAE-2020.book1.054–057
8. Jackson M.C. Alexander Bogdanov and modern systems theory. In: Systems analysis in economics — 2020. Proc. 6th Int. sci.-pract. conf.-biennale (Moscow, 09–11 December 2020). Moscow: Nauka; 2021:36–39. URL: https://systemeconomics.ru/wp-content/uploads/plenarysession-1_36–39.pdf (accessed on 10.10.2022). DOI: 10.33278/SAE-2020.book1.036–039
9. Buzgalin A.V., Kolganov A.I. The systems view of the economy: Positive critique of the methodology and theory of G.B. Kleiner. *Ekonomicheskaya nauka sovremennoi Rossii = Economics of Contemporary Russia*. 2016;(4):43–64. (In Russ.).
10. Gel'tser Yu.G. Fundamentals of a predictable economy. Economics in the light of general systems theory. Moscow: Lenand; 2018. 352 p. (In Russ.).

11. Kleiner G. Research prospects and management horizons of system economics. *Upravlencheskie nauki = Management Sciences in Russia*. 2015;5(4):7–21. (In Russ.).
12. Taleb N.N. The black swan: The impact of the highly improbable. New York, NY: Random House; 2010. 444 p. (Russ. ed.: Taleb N.N. Chernyi lebed'. Pod znakom nepredskazuemosti. 2nd ed. Moscow: KoLibri, Azbuka-Attikus; 2020. 736 p.).
13. Chace C. The economic singularity: Artificial intelligence and the death of capitalism. Three Cs; 2016. 485 p.
14. Keynes J.M. The general theory of employment, interest and money. London: Macmillan; 1936. 383 p. (Russ. ed.: Keynes J.M. Obshchaya teoriya zanyatosti, protsenta i deneg. Moscow: Progress; 1978. 458 p.).
15. Kuhn T. The structure of scientific revolutions. Chicago, IL: University of Chicago Press; 1962. 210 p.
16. Kuhn T. The structure of scientific revolutions. Chicago, IL: University of Chicago Press; 1962. 210 p. (Russ. ed.: Kuhn T. Struktura nauchnykh revolyutsii. Moscow: Progress; 1977. 300 p.).
17. Dosi G. Technological paradigms and technological trajectories: A suggested interpretation of the determinants and directions of technical change. *Research Policy*. 1982;11(3):147–162. DOI: 10.1016/0048-7333(82)90016-6
18. Stepin V.S. Scientific knowledge and values of technogenic civilization. *Voprosy filosofii*. 1989;(10):3–18. (In Russ.).
19. Dem'yankov V.Z. The term paradigm in “native” and “foreign” areas. In: Paradigms of scientific knowledge in modern linguistics. Coll. sci. pap. 2nd ed. Moscow: INION RAS; 2008:15–39. (In Russ.).
20. Rybachuk M.A. The dialectic interaction of general scientific and disciplinary (by the example of natural science and economics). *Zhurnal ekonomicheskoi teorii = Russian Journal of the Economic Theory*. 2016;(1):114–122. (In Russ.).
21. Fayol H. Administration industrielle et générale. Paris: H. Dunod et E. Pinat; 1917. 174 p. (Russ. ed.: Fayol H. Obshchee i promyshlennoe upravlenie. Moscow: Central Institute of Labor; 1923. 122 p.).
22. Barrow J.D., Tipler F.J. The anthropic cosmological principle. Oxford: Clarendon Press of Oxford University Press; 1986. 736 p.
23. Ryazanov V.T. Comprehension and interpretation in the economic science: The role of language. *Vestnik Sankt-Peterburgskogo universiteta. Ekonomika = St. Petersburg University Journal of Economic Studies (SUJES)*. 2008;(4):3–21. (In Russ.).
24. Kleiner G. From the economy of individuals to systemic economy. *Voprosy ekonomiki*. 2017;(8):5674. (In Russ.). DOI: 10.32609/0042-8736-2017-8-56-74
25. Kleiner G.B., Rybachuk M.A., Karpinskaya V.A. Development of ecosystems in the financial sector of Russia. *Upravlenets = The Manager*. 2020;11(4):2–15. (In Russ.). DOI: 10.29141/2218-5003-2020-11-4-1
26. Adner R. Ecosystem as structure: An actionable construct for strategy. *Journal of Management*. 2017;43(1):39–58. DOI: 10.1177/0149206316678451
27. Abdikeev N.M., Grineva N.V., Loseva O.V., Mel'nichuk M.V. Development of the theory of intellectual capital in the context of digitalization of the economy. Moscow: RuScience; 2022. 172 p. (In Russ.).
28. Berry L.L. Discovering the soul of service: The nine drivers of sustainable business success. New York, NY: The Free Press; 1999. 288 p.
29. Gallagher R.S. The soul of an organization: Understanding the values that drive successful corporate cultures. New York, NY: Kaplan Business; 2002. 256 p. (Russ. ed.: Gallagher R. Dusha organizatsii. Kak sozdat' uspechnuyu korporativnuyu kul'turu. Moscow: Dobraya kniga; 2006. 352 p.).
30. Kleiner G.B. System paradigm and system management. *Rossiiskii zhurnal menedzhmenta = Russian Management Journal*. 2008;6(3):27–50. (In Russ.).
31. Kleiner G.B. Social leadership, power splitting, and inclusive management of the organization. *Voprosy ekonomiki*. 2022;(4):26–44. (In Russ.). DOI: 10.32609/0042-8736-2022-4-26-44
32. Lefebvre V.A. Reflection. Moscow: Cogito-Centre; 2003. 496 p. (In Russ.).
33. Lepskii V.E. Reflexively active environments for innovative development. Moscow: Cogito-Centre; 2010. 255 p. (In Russ.).

34. Kleiner G.B. The principles of duality in the light of the system economic theory. *Voprosy ekonomiki*. 2019;(11):127–149. (In Russ.). DOI: 10.32609/0042–8736–2019–11–127–149
35. Graves C.W. An emergent theory of ethical behavior based upon an epigenetic model. 1959. URL: http://www.clarewgraves.com/articles_content/1959/I.html
36. Graves C.W. Levels of existence: An open system theory of values. *The Journal of Humanistic Psychology*. 1970;10(2):131–154. DOI: 10.1177/002216787001000205
37. Beck D., Cowan C. *Spiral dynamics: Mastering values, leadership, and change*. Hoboken, NJ: Wiley-Blackwell; 1996. 331 p.
38. Beck D.E., Cowan C. *Spiral dynamics: Mastering values, leadership, and change*. Hoboken, NJ: Wiley-Blackwell; 2005. 352 p. (Russ. ed.: Beck D., Cowan C. *Spiral'naya dinamika. Upravlyaya tsennostyami, liderstvom i izmeneniyami v XXI veke*. Moscow: BestBusinessBooks; 2010. 424 p.).
39. Kleiner G.B. Spiral dynamics, system cycles and new organizational models: Pearlescent enterprises. *Rossiiskii zhurnal menedzhmenta = Russian Management Journal*. 2020;18(4):471–496. (In Russ.). DOI: 10.21638/spbu18.2020.401
40. Kuropatkina L.V. Human resource management strategy in turquoise and pearl organizations. In: Strategic planning and development of enterprises. Proc. 23rd All-Russ. symp. (Moscow, April 12–13, 2022). Moscow: CEMI RAS; 2022:68–72. URL: <https://symposium-cemi.ru/symp23-s1-18/> (accessed on 10.10.2022). (In Russ.). DOI: 10.34706/978–5–8211–0802–9-s1-18
41. Kleiner G. Sustainability of Russian economy in the mirror of the system economic theory (Part 1). *Voprosy ekonomiki*. 2015;(12):107–123. (In Russ.). DOI: 10.32609/0042–8736–2015–12–107–123
42. Kleiner G. Sustainability of Russian economy in the mirror of the system economic theory (Part 2). *Voprosy ekonomiki*. 2016;(1):117–138. (In Russ.). DOI: 10.32609/0042–8736–2016–1–117–138

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