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HUMAN DEVELOPMENT MANAGEMENT AS THE BASIS FOR THE PRE-ADAPTATION OF COMPLEX SYSTEMS IN CONDITIONS OF UNCERTAINTY AND UNPREDICTABILITY

Abstract

The article is devoted to the issue of managing the balanced development of human potential in a new socio-economic reality, which is characterized by a high degree of unpredictability, interconnectedness and interdependence, globalization and informatization of the environment and introduction of digital, cognitive and hybrid technologies. There is a need to recognize the dominant role of scientific knowledge and creative implementation, wise management and consumption. For the first time, the term “noo-management” was introduced: it is a method of intelligent management of the fundamental processes of personality development focused on higher-order values and creative implementation.

Keywords: actual human paradigm, new industrial society (NIS.2), pre-adaptation, human potential, balanced development, meta-values, creative realization, noo-management, creativity, self-knowledge.

Introduction

The modern world is on the verge of significant changes, which can be carried out in the direction of creation and destruction. The global systemic situation, which is an actual one yet, has affected all spheres of human life: biological, economic, political, social, technological and environmental. It highlighted the danger of unreasonable treatment of nature, technology, public consciousness and showed how “small random change can serve as the beginning of changes in the evolution of the system, which become irreversible” (Leontiev, 2018).

Scientific research in the current situation allows concluding that now fundamental changes are taking place in the individual and public consciousness, interstate and interreligious differences are levelled, and they change in the human paradigm, and the type of socio-economic structure is brewing.

The new paradigm should include in the sphere of attention and responsibility of a person and public institutions “everything that they can

influence in the spheres under their control and in the areas they do not control” (Drucker, 2003). The new paradigm is being formed under the conditions of increasing uncertainty, technical and technological revolution and awareness of the interconnectedness and interdependence of all members of the socio-economic community. The new paradigm should help overcome the “lack of meaning, trust and understanding” (Anokhin, 1962) in the emerging environment.

The globalization of information, communication and institutional space and the emergence of artificial intelligence systems contribute to the accelerating withdrawal of a person “beyond the limits of material production” (Bodrunov, 2018), document circulation and other routine specializations and creates conditions for the full realization of human potential. “Elementary unit of human potential, community and country is the potential of individual”. The core of human potential is “abilities” that determine its power (Ivanov, 2014). The development of innate personality traits and the demand for charisma helps to maximize the state of emergency at all its lev-

els and at the same time allows removing one of the central contradictions between the unique abilities of a person: developed inclinations and the possibility of their application. In this case, a person can realize his destiny as a rational being, capable of carrying out a creative process that creates novelty, shaping the world.

Human development management can be implemented in the context of the formation of a new industrial society of the second generation (NIS.2) (Bodrunov, 2016). NIS.2 and its economics “will become a denial of denial, a dialectical subtraction of the late industrial system described by J. Gilbraith, and the informational and post-industrial trends described by D. Bell and other post-industrialists” (Bodrunov, 2016). Despite the global change in technological foundations, material production remains predominantly industrial, and a person finds “next to production”, and can “relate to the production process as its controller and regulator” (Marx & Engels, 1969). The emergence of “smart” enterprises makes production deserted, but “the person is left with the functions of development, customization and goal setting” (Bodrunov, 2018).

The basic factor of NIS.2 is scientific knowledge as an intangible basis not only for all components of modern production but also for all aspects of the development of individual and social systems. “Knowledge is universe and basis of the system of the universe” (Bodrunov, 2018). Scientific creativity and its result, scientific knowledge, can gradually become dominant in the human world. However, knowledge “without reliance on spirituality becomes hopeless, even dangerous” (Gubanova, 2018). Spirituality in this context can be characterized as “creative self-fulfillment that has meaning and significance for a person and the world around him” (Gubanova, Kolosova, & Mikhailova, 2018). The spiritual principle is based on universal human archetypal values that are correlated with the laws of nature.

The article attempts to describe the specific features of the emerging reality, the fundamentals of balanced human development and the

method of managing the development of human potential, focused on meta-values (values of the highest order and creative realization).

Specific Features of the New Socio-Economic Reality

The rapid approach of human civilization to the point of bifurcation, which could cast doubt on the very possibility of the continuation of human existence as “Homo sapiens”, was suspended by the global systemic crisis. The consequences of this crisis are difficult to predict; nevertheless, the current situation clearly shows to humankind the unpredictability of unreasonable handling of nature and technology, the danger of collision of various interests of individuals, social groups and peoples on a global scale, the difficulty of fitting into a digital “scalable” reality (Taleb, 2020). More than ever, the question of the need to reboot human consciousness, restructuring of socio-economic institutions and production systems based on modern scientific knowledge, the reasonable use of modern nano-bio-info-cognitive (NBIC) technologies, universal human creative values and priorities is becoming acute.

The development of scientific knowledge determines the emergence of new NBIC technologies. Nanotechnology involves the use of materials and technical systems, the functioning of which is determined by nanostructure (“nano” is one-billionth part). Such technologies, according to the author of the term N. Taniguchi, allow achieving “ultra-high precision and ultra-small dimensions”. Modern biotechnology is usually associated with the use of methods of biological sciences (microbiology, genetic engineering, etc.) in the production of a variety of goods and services. Information technologies include a set of methods and techniques for collecting, processing, storing and disseminating information and play the role of an integrating factor in modern conditions. Cognitive technologies are special technologies focused on the development of

human intellectual abilities. The formation of the sixth technological paradigm based on NBIC – the convergence of technologies produces the creation of hybrid systems that open up new perspectives in the development of mankind. At the same time, the impact and consequences of their use are almost impossible to predict and can lead to catastrophic results, which are already manifested today in the process of the development of a pandemic.

Responsible introduction of NBIC technologies and the formation of a single information and communication space, in accordance with the principles of the formation of the noo-sphere, described in the works of academician V. I. Vernadsky, create conditions for satisfying reasonable human needs without prejudice to wildlife: on the basis of its rational transformation (Gubanova, 2019). The use of technological innovations creates an opportunity to unite people and scientific institutions within a single communication environment, contributing to a synergistic effect and dramatically reducing the time from the birth of an idea to its implementation. However, the analysis of the socio-economic conditions formed to date allows concluding that as a result of the “evolution of capitalism”, the world as a social category “returned to early capitalism and is on the way to feudalism” (Hudson, 2018). Industrial capitalism could not free society from “growths - socially unnecessary costs, in the form of economic rent”: land and financial rent from the formation of monopolies by financial circles. “The rich get richer and, and the poor get poorer”. Capital generates fictitious capital without creating anything (Harvey, 2018). Such accumulations are not formed by extracting surplus value. The growth of fictitious capital leads its owners to unreasonable consumption and a desire for luxury.

Demand creates supply; however, while in developed countries labour is the most expensive component of production (the share of wages in the final price of the product is about 70%), in some countries, it is deficient, in Russia, for ex-

ample, in basic industries, it is about 7-11% (VEO of Russia, 2018). The ratio of the tariff and additional parts of the salary is on average 30 - 70%, which makes it possible to reduce basic obligations and cover managerial incompetence, 80% of the money is received by 48% of employees, the rest of people receives 20%. This differentiation in distribution is not associated with either the real level of professionalism or economic feasibility (VEO of Russia, 2018). This state of affairs sharply affects the quality of human potential, the level of demand for quality knowledge, the creation of progressively oriented jobs and their provision with qualified staff: professional work should be adequately paid. A decrease in the personal and collective level of development of consciousness leads to involution and does not allow producing and adequately using technological innovations and scientific developments that require high qualifications and responsibility. Humanity's entry into the digital economy in such conditions can provoke “increased instability of large social systems, which I. Prigogine associates with the increasing role of individual actions in them” (Leontiev, 2018). The systemic global crisis that broke out against the backdrop of a pandemic clearly shows that everything in the world is interconnected, and there is no way to be in a single system and at the same time be outside its borders. The combination of market mechanisms and social support, the availability of scientific knowledge and the creation of new jobs or other points of application of creative and intellectual labour that require high qualifications, as well as value orientations of a higher order become the primary conditions for creative evolution (Asmolov, 2021).

The global restructuring of consciousness begins with “intensification of microscopic fluctuations that occurred at the right moment, which leads to the predominant choice of one option from a number of equally a priori possible” (Asmolov, Shekhter, & Chernorizov, 2017). In conditions of unpredictability and uncertainty, eco-

conomic well-being, quality of education and preventive actions of an educational nature, increased attention to the study of the foundations of personality development and development of tools that induce a person and social systems “to search and move in the direction of development favourable to the world” are more important than ever (Gubanova, 2019).

Fundamentals of the Current Human Paradigm in Conditions of Uncertainty and Unpredictability

The search for an answer to the question about the nature of the formation and development of personality and social systems remains relevant for many centuries, and now, within the framework of the imminent change in the human paradigm and the type of socio-economic structure, it is becoming one of the priorities.

The power of the paradigm (from the Greek Paradeigma is “example, sample”) of a person, a system of concepts or a prism through which he looks at the world can hardly be overestimated. He “explains and then directs” (Covey, 2021), and if the “map of the territory” is wrong, we will not be able to reach the destination.

The current paradigm of a person in conditions of uncertainty and unpredictability should be based on a holistic, balanced view of a person in the context of the emerging socio-economic reality. To date, there is a growing interest in the scientific literature in research that describes human nature through the prism of control theory, social, philosophical and psychological sciences.

To date, the scientific literature has not developed an unambiguous system of concepts describing the key components of human potential.

Management theory has evolved from scientific management (F. Taylor, F. Gilbreth and L. Gilbreth, etc.), A. Fayol’s administrative management, the concept of bureaucracy by M. Weber, the school of human relations (E. Mayo, M. Follet, etc.), schools of behavioural sciences (F. Herzberg, D. McGregor, L. Laikert, etc.), quanti-

tative (N. Viiner, E. Bauman, R. Fetter, etc.), systemic (L. Bertalanfi, A. A. Bogdanov, S. Bir, etc.) and situational (F. Fiedler, P. Hersey, C. Blanchard and others) approaches, strategy theory (F. Selznik, I. Ansoff, M. Porter, etc.), application of participatory forms of management, awareness of the importance of the influence of culture (G. Hofstede, E. Hall, F. Trompenaars, etc.) and the recognition of social responsibility to a person and society as a whole to synergetics (G. Haken, I. R. Prigozhin), which concentrates its focus on chaos, complexity and self-organization. Tracing the evolution of management theory, we can say that in almost all directions and approaches, emphasis was placed on effective human management following the level of development of science, technology, personal and social consciousness. However, already in the first works on management, for example, in the work of F. Taylor “Scientific Management”, the fundamental goal of management was defined as “the maximum prosperity of the employer together with the maximum prosperity of each hired employee” and formulated 4 fundamental principles of management, among which stand out “scientific selection and the progressive development of the worker” and “constant close cooperation between management and workers” (Pugh & Hickson, 1994). A. Fayol formulates such management principles as: “fairness, stability of personnel, initiative, corporate spirit”, etc. The economic crisis and the deterioration in the performance of organizations based on the recommendations of representatives of classical schools contributed to the emergence of a new philosophy of management, revealed in the studies of schools of human relations and behavioural sciences. The School of Human Relations explored the role of the human factor in the production process. Within the school of human relations framework in the early 1930s, E. Mayo concluded that “managers should focus on creating favourable relationships in the team”. According to the theory of human relations, the leader’s main task is to make each participant in

the work process useful and necessary. G. Munsterberg, the founder of the school of industrial psychologists, was one of the first to study the psychological aspects of management. His work "Psychology and Industrial Efficiency" examines the issues of career guidance, professional selection and substantiates the possibility of increasing labour productivity based on the selection of "right people for right jobs" (Duncan, 1996). According to G. Munsterberg, a manager, first of all, "manages people, not machines". Better relationships in the workplace have influenced job satisfaction and increased productivity. The development of psychology and sociology by the 1950s transferred the study of behaviour in the workplace on a solid scientific footing. The main goal of the school of behavioural sciences is to increase the organisation's efficiency by increasing the efficiency of its human resources (Mescon, Albert, & Hedueri, 1997). In the paradigm of human resource management, the main focus is on the person as the critical resource of the organization. A human resource is available stock of knowledge, skills and abilities that can be used if necessary. The term "human resources" reflects the economic feasibility of investment in a person in developing his skills and abilities to solve socio-economic problems. The principles of human resource management are the following: loyalty to employees, responsibility, use of work methods focused on the disclosure of the abilities of employees and creation of job satisfaction, etc. and focus on training and human development to achieve organizational goals. In this case, "person turns into a resource that can develop to the detriment of his right to choose" (Gubanova, Vnuchkov, & Mikhailova, 2017). The formation of human capital, that is, valuable properties that can generate income that can be developed with the help of appropriate investments, depends not only on the capabilities but also on the student's efforts, his natural inclinations and motivation. The organic connection "natural abilities - human capital" (Soboleva, 2009) allows improving the quality of human

resources. However, in the context of the concept of human resource management, there is practically no real basis for ensuring this process.

The evolution of human control is based on progressively developing knowledge. The famous Russian scientist in the field of management L. I. Evenko identifies a sequential change in four basic concepts of human management in an organization: use of labour resources, personnel management, human resource management and human management, which have evolved within the framework of three approaches: economic, organic and humanistic (Evenko, 1996). The economic approach is reflected in Taylorism. Within the framework of the organic approach, which presupposes a special interest in a person, the concepts of personnel management and human resource management have been consistently developed. The humanistic approach is based on the concept of organization as a "cultural phenomenon" and proceeds from the concept of human management, which is "the main subject of the organization and a special object of management" (Evenko, 1996). This approach clarifies through what meanings joint activities are realized in the organization and is not only the basis for developing its strategy but also a way of transforming the surrounding reality. In the XXI century, management science solves the problem of developing methods by which complex systems can function effectively in conditions of uncertainty and unpredictability.

In recent decades, there has been an increase in interest in the theory of human potential in international and Russian practice. When developing the concept of sustainable development within the framework of the United Nations Development Programme, the calculation of the Human Development Index (HDI) has become widespread. This index allows, with a certain degree of objectivity, to compare human potential at the level of countries participating in the rating and to track the dynamics of development or degradation of human potential in a particular country. HDI is calculated using three equivalent

components related to per capita income, educational attainment and life expectancy.

The formation, development and realization of human potential is a condition and a key goal of social and personal evolution. From the standpoint of the staff of the Institute of Man of the Russian Academy of Sciences, which was one of the first in Russian conditions to begin to study the study of human potential in the concept of “human potential”, an attempt is made to link philosophical reflections on the essence of man and the meaning of his life with scientific developments that describe and assess the possibilities and prospects of his existence (Yudin, 1998). In the aggregate human potential of society, four levels of potentials can be distinguished: “personal, group, the potential of social communities and potential of the entire population of the country” (Ivanov, 2014). The mechanism for generating the aggregate human potential is associated with the potential of individuals who, entering into various groups and social communities, form potentials that, in their power, surpass the potentials of individual individuals. Personal potential is something given at birth and is formed mainly in the process of socialization (Yudin, 1998). During the formation of neural networks of the brain, sensitive periods are distinguished, the use or non-use of which promotes or prevents the transformation of innate inclinations into abilities, talents and charisma. The development of innate inclinations allows maximizing the individual's potential and, under appropriate external conditions, contributes to the maximum development of human potential at all its levels. Human potential is formed on the basis of external (social) and internal (individual) capabilities, which can be transformed into “needs, abilities and readiness” (Ivanov, 2014) of a person, group, organization, state and humanity to cope with urgent tasks for the development of a person and his living environment.

From the point of view of philosophy, science is the most important socio-cultural value that develops and improves knowledge about the

world, its properties and patterns. In the evolution of the scientific picture of the world, classical and modern models stand out. This model is built on the idea of rigid determination and leads to the recognition of the fatal predetermination of everything that exists. The discovery of the theory of relativity and the laws of thermodynamics contributed to the emergence of a non-classical theory that describes a picture of the world with a more flexible system of determination. The non-classical model recognizes the dialectical relation between determinism and indeterminacy and determines that development is probabilistic, which determines the presence of alternative possibilities and chance. Since the 1970s, a quantum-relativistic model of the world has been developed, formed at the junction of synergetics and general systems theory. Synergetics studies the problems of the self-organization of systems at various structural levels. I. Prigozhin, in his works “Order from chaos. A new dialogue between man and nature”, “From existing to emerging”, following G. Haken, gives a new interpretation of many fundamental principles and concepts (Gubanova et al., 2017). On this basis, it can be concluded that any social system, being extremely complex and contradictory in its development, can be multivariate and unpredictable. The modern scientific picture of the world is also a synthesis of the previous ones. At the same time, it is a qualitatively new theoretical model of objective reality, making it possible for a deeper understanding and explanation of natural and social processes.

Philosophical sources describe two complementary world views: western and eastern (expedient and causal). In the western (expedient) model, life is presented as a limited manageable resource, time is perceived as a “unidirectional linear vector” (Lewis, 1996). The western way of development focuses on self-government and self-realization. In the eastern (causal) model, the border of the world is blurred, the meaning of life is inside it, and a person is simply present in it (Gubanova, 2019). The perception of the basis

for the formation of a picture of the world as a process of learning and socialization of a person associated with scientific, religious, national, family values and traditions through the prism of western and eastern models contributes to a better understanding of the objective (causal) and subjective (expedient) nature of a person. The ability to switch from the status of the subject to the object's status allows at different moments of life to treat it as a managed resource or to be present and enjoy the moments of being (Gubanova, 2019). Integration of the western and eastern paths of development allows realizing the nature of the imbalance of the subjective and objective sides of human life and removing the contradiction between the presence of a need and the possibility of its immediate satisfaction.

In the scientific literature on personality psychology, fundamental approaches to understanding human nature are distinguished.

The psychodynamic approach (S. Freud and others) is based on experience and identifies a person and other living beings. The subject of scientific study is the qualities that make humans and animals related. At the same time, an attempt is made to ascribe an animal meaning to the value characteristics of a person, and the formation of a personality is carried out according to predetermined natural mechanisms (Freud, 2020).

The behaviouristic approach is oriented towards the future and is built "along with the lines of developed sciences" (Maslow, 1999). Learning plays an important role in a person's life, but it can be used in constructive, destructive, or unproductive ways. Education, consistent with the natural inclinations of a person, and the assimilation of high-quality advanced scientific content can become the basis for achieving acme at every level of formation and development of a personality and creates conditions for its creative development. The presence of creative potential, the ability to invent and art, is a fundamental property that distinguishes a person from other living beings. "The need for creativity is a fundamental feature of a person that forms and actu-

alizes his consciousness" (Vygotsky, 1982). Creativity creates new neural pathways, and thus the formation and restructuring of "hypernets" of the brain occur (Anokhin, 1962). Creativity can be defined as the purpose of the human brain, which creates novelty that changes a person and the world around him.

The humanistic approach (K. Rogers, V. Frackl, etc.), returning to human experience, the experience of primary reality, focuses on the present and explores the state of man and his values in the situation "here and now". However, postulating the values of a person as he is, the humanistic approach may not contribute to the individual's spiritual development since excessive fixation on biological and social aspects narrows the boundaries of the world, which lies beyond biological needs and social roles. The momentary state of a person affects the decision-making process in a specific situation.

The transpersonal approach, based on the highest universal human values, "is addressed rather to the world in general than to human needs and interests, goes beyond the limits of human nature and identity of the man and his self-actualization" (Maslow, 1999). A person is often afraid of "peak experiences" and the realization of his highest potential. And at the same time, he is in awe of the extraordinary capabilities of others. Furthermore, this admiration, surprise, "willingness to be enchanted", and recognition of the genius of others is one of the possible ways of realizing and accepting talents and abilities. The way to reconcile humility and pride is to accept "the divine possibilities within you and the limitations of human existence" (Maslow, 1999). Allocation of the transpersonal approach allows combining fundamental approaches that describe the biological, mental and social nature of a person into an integral system of a higher order, highlighting the spiritual dimension as the basis of this integration (Gubanova, 2019).

The study of fundamental approaches to understanding human nature makes it possible to assume that the selected systemic approaches

focus on the formation of a person at different stages of his development and describe the biological, mental, social and spiritual components of human life. The biological (physical) component is associated with physical, neurophysiological and psychophysiological aspects. Psychological (intrapersonal) is associated with natural inclinations, intellectual and emotional aspects. Social (interpersonal) is associated with socially significant functions, roles and relationships. Spiritual (transpersonal) is associated with existential, creative and philosophical aspects of human life. The totality of these aspects is the components of the bio-psycho-socio-spiritual concept of a person.

In the modern turbulent world, with the development of neurosciences, the emergence of artificial intelligence systems and hybrid technologies, the human paradigm is changing rapidly and practically uncontrollably. The biopsychosocial-spiritual concept, permeated with the highest universal human values, can become the basis of the actual human paradigm.

Understanding the Basic Foundations of Personality Development in Modern Conditions

Creative evolutionary development is associated with a gradual rethinking of the accumulated experience and knowledge, possibly, in an “ideal” environment that promotes the disclosure, education and self-improvement of the individual, in an environment that allows a person to live and develop for the benefit of himself and the world around him – in line with his inclinations and abilities, which are gradually transformed into charisma. In this case, “new formation” (Vygotsky, 1982) is formed based on “insiders of evolution” (K. Dunker), obtained in the process of assimilation of new experience without crises within the limits of the motivating level of tension (stress). The revolutionary development path is associated with “the impossibility of achieving what an individual could be-

come if it grew and developed without hindrance” (Maslow, 1999). The revolutionary development is accompanied by a number of crises that have different origins. Analysis of scientific sources describing the periodization of development (Z. Freud, E. Erickson, J. Piaget, etc.) allows identifying and studying the classification of crises.

Psychosomatic crises are caused, on the one hand, by the need for a biological organism to feed and maintain it in a natural working state; on the other hand, by its response to the external environment and internal mental processes. “Psychosomatic disorder is always associated with the fact that you do not feel something very important or something that hurts” (Lowen, 2011).

A person’s adaptability causes psychodynamic crises to the conditions of the biological and social environment. A person is influenced by instincts and drives, social norms and restrictions. According to Freud, the loss of a desired object, love, oneself or love for oneself gives rise to anxiety. Avoiding anxiety on the basis of distortion or denial of the situation becomes an obstacle to growth (Freud, 2020).

Psychosocial crises are caused by the relation between a person and society. This cooperation ensures the formation of constructive character traits, mistakes in upbringing and traumatic relations contribute to the formation of its destructive features. According to E. Erickson’s ego psychology, development is determined by the relation of psychosomatic, psychosexual and psychosocial lines, and its main content is the acquisition of ego identity: the sense of the integrity and continuity of one’s existence.

Existential crises are caused by the loss of purpose, the meaning of existence and separation. The reason for such crises, for example, can be cardinal changes, collision with everyday issues. The emergence of dramatic changes that cause a state of confusion and helplessness often leads to a loss of perspective for the future. In today’s global environment, such a state can be

aggravated by a flurry of distorted and pseudo-scientific information or compensated by the pursuit of meanings. In pursuit of meanings, a person is in a state of constant search or learning, and his life energy, according to the Yerkes-Dotson law, is spent on the primary service of these processes. In the absence of real experience and low quality of content in the information and communication environment, a stop in development may occur, and “digital dementia” may form (Spitzer, 2014).

The existential crisis associated with existential issues emphasizes human limitations, promotes awareness of the tragic side of one’s existence, and at the same time the recognition of the value of life, and the understanding that “a person is not completely conditioned and determined by circumstances, but, ultimately account, self-determined” (Maslow, 1999). The main task of the individual in overcoming the existential crisis is to come to the point at which he can make a conscious choice of how and why to live with a “feeling of inner harmony” (Langele, 2004). The answer to this question opens up an opportunity to realise spiritual values: meaning, unification and creativity. A crisis can also accompany the transition to the path of realizing the highest spiritual values. A spiritual crisis is a crisis that comes from within, and it is associated with the inability to live according to one’s creative nature or the lack of demand by the environment.

Understanding the nature of the crisis as a failure of evolutionary growth allows revealing its “positive meaning” (Vygotsky, 1982) and using it as an indicator of the problem, holding back development. Every step accompanies anxiety on the path of personal development. However, prolonged absence of the desired step often leads to depression: a way of containing anxiety. Translating a problem into a task and solving it removes excessive anxiety and promotes positive personal and social change. Preventive actions of an educational nature and the introduction of psychological and pedagogical counselling and

training in psycho-technics into the education system and organizational development accelerate the formation of a creative socio-psychological foundation. Psychotechnics is “philosophy of ethics” according to L. S. Vygotsky (1982), according to the statement of its founder G. Munsterberg (1996), is called upon “to transform practical life with the help of psychology for the implementation of cultural tasks”. In current conditions, applied psychology is becoming a part of everyday life. The use of psychological testing (for example, Eysenck, Keirsey, Rokeach tests, etc.) leads to the expansion of the boundaries of self-knowledge. Learning to use psychotechnics contributes to the formation of skills to independently overcome psychological problems and reduce the impact of crises on human life.

Noo-Management as a Way of Forming Pre-Adaptive Creative Potential in Conditions of Uncertainty and Unpredictability

A progressively developing personality goes through a series of amazing transformations during life, and as it happens in nature, gradually “from a pupa turns into a butterfly”, easily and beautifully hovering above the Earth in harmony with itself and the world around (Gubanova, 2019). This state can be compared with “streaming experiences” (Csikszentmihalyi, 2011), associated, according to M. Csikszentmihalyi, with the application of conscious efforts and with intuition. Intuition is inner knowledge is the result of insight, not logical reasoning. The “apple” falls on a prepared mind generated by many years of search efforts. That is to say, and intuition is also based on the results of the educational process: the process of developing consciousness.

K. Jung (2020) identifies three stages in the development of human consciousness:

- stage of a disordered or chaotic state (from birth to puberty);
- stage of development of ego complex (from

puberty to 35–40 years);

- stage of comprehension of the divided dualistic state (from 35–40 years old).

The first stage corresponds to the pre-personal level of consciousness development and is characterized by a person's dependence on the environment, the impossibility of making independent decisions and their implementation. At this stage, due to the lack of ideal conditions for growth and development, a person can form patterns of behaviour that impede harmonious movement, and the presence of distorted knowledge in the personality structure has a destructive effect on its further development.

The second stage is characteristic of the personal level of development of consciousness. The demands of life determine the rejection of the illusions of childhood, unfounded optimism or pessimism, which are at odds with reality. At this stage, the personality builds a structure of interrelated motives, which it can freely move per the interests and influence. The second stage allows forming a stable personality construct and adapting to the future's possibilities and requirements. However, in this case, a person can confine himself to achievable, socially significant goals, to the detriment of the development of his own uniqueness, and in the modern world, a high rate of environmental change can hinder the formation of a stable basic structure.

The third stage corresponds to the transpersonal level of development of consciousness, at which a person freely integrates into the external environment, based on the priority influence of universal values and creative realization. Heidegger distinguishes between a person ("Men"), faceless, stereotyped, robotic, and a "genuine man" ("Dasein"), who is holistic, fully realizing his potential (Tsvetkov, 2006). A harmonious path of development is the path of a genuine person is possible starting from the third stage of the development of consciousness. Such a person is capable of high-quality conscious and, passing to intuitive decision-making in a new situation, to the maximum degree of self-realization that goes

beyond the social corridor.

To pass the highlighted stages, at each of them, a person needs a fulcrum: "Give me a fulcrum, and I will turn the whole world over". Furthermore, quality knowledge: "Give me a fish, and I will be full today, teach me how to fish, and I will be full all my life". These aspects do not lose their relevance in the face of uncertainty and unpredictability.

In one of his works, E. Toffler (1997) points out that the illiterate is not the one who cannot read and write, but the one who cannot learn. The ability to learn, a psychological fulcrum, can be associated with mastering the tools of self-knowledge, self-regulation, self-government and development of creative potential in the framework of special education programs for students and consulting and practical educational seminars for adults. The physical fulcrum in current conditions goes to the system level. It should be associated with the formation of a new socioeconomic structure that provides a healthy lifestyle and points of application of creative and intellectual labour, requiring a high degree of involvement of consciousness and adequate material support.

The concept of advanced development (Anokhin, 1962) and the concept of strategic development focused on adequate forecasts of the future: linear growth in a turbulent world becomes poorly realizable. However, advancing strategic development based on a high-quality scientific base, "magnetic north", and human charisma helps to reduce unpredictability and makes it possible to actualize the "pre-adaptive" (Asmolov et al., 2017) potential.

The use of modern educational, psychological and managerial technologies permeated with the spiritual dimension made it possible to develop and test the method of balanced development of human potential: "psycho-management" (Gubanova, 2019). The use of modern knowledge in the field of the neurophysiology of the brain allows learning to take into account the peculiarities of its work in everyday life. Fitness for the

brain, formation of interhemispheric connections and synchronization of the work of the hemispheres, use of particular technologies for the development of creativity contributes to improving the quality of brain processes, disclosure and development of creative potential. The enrichment of psycho-management with fitness techniques, techniques for the development of creativity and interhemispheric synchronization contributes to the fundamental adjustment of the brain to the possibility of performing creative processes and preparation for the implementation of its true evolutionary tasks: creativity. The implementation of the enriched method, noo-management (intelligent management - from the Greek noos – “mind”), is based on modern scientific titles in the neurophysiology of brain function and spiritual dynamics. Noo-management allows not only adjusting and balancing the elements of fundamental vital subsystems: somatic, intellectual, emotional, social and spiritual but also learning how to “use the brain” based on meta-values and the formation of relevant competencies in the following areas:

- development of creativity, interhemispheric synchronization and improvement of the quality of the brain for its adjustment of the brain to the possibility of carrying out creative processes: active generation of “hypernets”;
- “self-knowledge, self-government and self-regulation” (Gubanova, 2019).

In the report “On the formation of personality” K. Jung noted: “No one is able to educate a personality if he is not a personality himself”, and in his work “Psychology of the Unconscious”, he added: “The psychology of an individual person corresponds to the psychology of a nation” (Jung, 1994). In this regard, it can be noted that the formation of a new type of socio-economic structure, the system-forming component of which is information, is superimposed on the level of maturity of the individual and socio-economic institutions that contribute or hinder systemic social development and economic support of biopsychosocial-spiritual processes. The intro-

duction into the education system of special training programs for noo-management contributes to the formation of creative socio-economic foundations at the level of personal and social consciousness. In the process of noo-control, the brain is tuned to creative processes, the awareness of the importance of balancing the biopsychosocial-spiritual aspects as the basis for healthy creative realization takes place, skills are acquired for solving urgent life problems without crises: loss of balance (Jung, 1994).

Conclusion

The basic trend of socio-economic development in modern conditions is scientific knowledge, which can dominate the human world. Scientific knowledge is the result of a creative process, a product of the activity of a person who has a developed creative potential and who is in socio-economic conditions conducive to the generation of novelty.

On the way to the formation of a creative personality, there are two fundamental obstacles from-psychological and socio-economic nature.

The study of psychodynamic, behavioristic, humanistic and transpersonal approaches to understanding human nature, describing his biological, mental, social and spiritual nature, respectively, allows concluding that they are consistent with the biopsychosocial concept of man. The biopsychosocial-spiritual concept, permeated with the highest universal human values, can become the basis of actual human paradigm in conditions of uncertainty and unpredictability, and its implementation on the basis of an “integrative-indicative approach to balanced human development” (Gubanova, 2019) helps to level social and psychological barriers to development. An integrative-indicative approach allows customizing the biopsychosocial-spiritual system of a person, “integrating key motivations, actual competencies and processes of creative implementation into a stable personality structure, based on emerging indicators” (Gubanova,

2019). Understanding the nature of the crisis as a failure of evolutionary growth makes it possible to use psychosomatic, psychodynamic, psychosocial, existential and spiritual crises as an indicator of a problem holding back development. Translating a problem into a task and solving it contributes to positive personal and social change. The widely implemented rational management based on the introduction into the education system and organizational development of special programs for noo-management at each level of consciousness development (pre-personal, personal, transpersonal) within the school, university and self-education, respectively, becomes three “whales” on which it can stay and continue its development of the human world in the digital age. The introduction of such programs has a preventive effect and allows identifying and eliminating the problem before it develops into a crisis.

The conditioned evolutionary transformation of the personality and social systems can occur in an environment that creates conditions for the disclosure and realization of the natural potential of a person in artificially created creative socio-economic relations. The formation of new socio-economic conditions, the new generation of industrial society, based on spiritual dynamics, the combination of market mechanisms and social support, availability of scientific knowledge and creation of relevant points of application of creative labour eliminates the contradiction between the unique human abilities, developed inclinations and possibility of their applications, leveling socio-economic obstacles to evolution.

Ultimately, noo-management based on scientific knowledge and spiritual dynamics allows a creative brain to be “created” and used for its intended purpose, leading to the formation of an environment that has pre-adaptive potential. In this case, the appearance of the “Black Swan” (Taleb, 2020) can be experienced without personal crises and global systemic catastrophes. A person and social systems can go from egocentrism and ethnocentrism to complete humanity

and freedom throughout life. For this, it is necessary to create creative socio-economic and socio-psychological conditions that help a person learn to “reveal his majestic nature, achieve understanding and introduction and comprehend the truth” (Maslow, 1999): to learn to be and to see the Sun.

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