

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL PEDAGOGICAL DRAGOMANOV UNIVERSITY**

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**PHILOSOPHICAL MODE OF THE GENERAL
MANAGEMENT THEORY**

Monograph

Kyiv

2015

UDK 303 . 725 . 36 . 000 . 141

BBK 60 . 55 . 87

B 55

*Approved for publication by the Academic Council of
National Pedagogical Dragomanov University
(Minutes No 7 of February 23, 2013)*

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B 55 Philosophical Mode of the General Management Theory: Monograph / Yu. V. Bekh; Ministry of Education and Science of Ukraine, National Pedagogical Dragomanov University / Ed. by V. P. Bekh. – Kyiv : Dragomanov NPU Publishing House, 2015. – 460 p.

The author has grounded the holistic concept of the mechanism of the world view and ideological support of the general theory of management formation by technical, biological and social systems. The state and the rate of formation of organizational and informational unity of the international community, its integrity depends on its creation. The philosophy of management is considered as a semantic field and the main epistemological tools of the problem research in the discourse of which there is a sharp ideological confrontation of leading paradigms: of technocracy, eco-humanism and humanity, we can trace the formation of holistic world view and the ideology of dynamic equilibrium in management activity and an adequate organizational culture and consciousness of the researcher. The mechanism to solve this problem, which is at a higher level than the specific categories of management, "withdrawn" by generic term "general management theory", are suggested. Under these conditions, the general theory of management is able to justify at the highest level the general laws and regularities; at the special, branch level – to substantiate special laws and regularities; at the empirical, or applied, level – to ground situational laws and regularities. The author's structure of the general management theory is presented.

The book is intended for researchers, teachers, masters, students engaged in research of management philosophy, management theory, sociology of management, psychology of management, political science, as well as for managerial resources, all those who are interested in the problems of system analysis of management and development of integrative management of technical sphere, society and nature.

УДК 303.725.36.000.141

ББК 60.55:87

ISBN 978-966-7166-32-8

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Preface

Dear reader,

The actuality of the theme of the monograph concerning the investigation of the origin of general theory of management lies in the fact that the globalization displacements in the structure of global life have led to formation of ontological, information and organization unite of world community. That is why the theoretical idea in the sphere of management of social development is strongly searching for philosophical-world view and ideological reasons for development the general theory of management that should ensure steady growth in the stage of creation of communicatory civilization.

During the 20th century the chain of administrative paradigms, conceptions, even theories have been formed; they purport to have the status of general one, for example: theoretical cybernetics, tectology or general theory of systems (systemology) by O. Bogdanov, B. Milner system of organization, the system of social theory (social systemology by Y. Rieznyk), the theory of social management (social management) and so on. Unfortunately, some of them particularly cybernetics and tectology, or general theory of management by O. Bogdanov theoretically do not lead to general shape, others, from their initial position, cannot reach the mature form. Impartial obstacles on this way are challenging conditions of modern society, the absence of integrity in world view of the epoch and in the ideology of management of social development in the condition of stable unbalance of social organism of the planet.

Theoretical value of the investigation on the origin of general theory of management by the author consists in the methodological soundness and theoretical consistency of formation the aim of analytic and searching work, in organization and solving the chain of scientific tasks by inductive way, that in the end will lead to fulfillment of the aim – the explanation of the origin and the structure of general theory of management.



Such substantial investigation of the author has its own scientific novelty that lies in some terms, that firstly in native philosophical thought the integral conception of philosophical basis of management general theory formation was created and the mechanism of this process philosophical support was proved on the base of using such cognitive means as: a) integral world-view (world wholeness), that is opened for awareness of transition from dynamic balance imperative to innovative unbalanced development; b) dynamic balance ideology in the administrative activity, that has in the conditions of world community development misbalance extremely active borders and is sensitive to correlation and opposition to technocratism, eco-humanism and humanism; c) dispositive – a social organism of the planet, that finishes the formation of its integrity; d) categorical apparatus of management philosophy or the knowledge about management; e) present stream of social information (general semantic field); f) means and methodology of analytic work; g) organizational consciousness; h) organizational culture; i) general algorithm of making management decisions; j) the logic of the generic-aspectual subordination of notions; k) algorithm of the scientific theory development.

So, the researcher formulates and solves the actual scientific problem of modern period of development of our native and the world theoretical idea in the sphere of regulation of organization relations in the period of deepening the globalization and simultaneous globalization of managerial structure of world community.

Practical meaning of the received results is determined by the introduction of the three products of this investigation to the theoretical heritage: 1) cognitive mechanism of general theory of management formation; 2) the structure of general theory of management, that concords with the structure of sociology; 3) two educational disciplines “Philosophy of management” and “The general theory of management”, and also by the opportunities of



using separate regulations and ideas in formation of educational disciplines in the system of higher professional education and the modernization of educational plans for training the specialists of management on the qualitative new world view and ideological platform. At the same time, it all attests to the higher level of philosophical and methodological culture of the researcher.

Professor V. P. Bekh

Kyiv, 2015



INTRODUCTION

The actuality of the study of the genesis process of the general theory of administration or management of technical, biological and social systems is determined by the fact that any branch of knowledge, that has reached a certain stage of maturity, requires a reflection of its own reason of being. Reduction to a single semantic field of different types of management is the essence of the cognitive analysis. In this case the analogue is the work of H. Gegel «Philosophy of Religion», in which he proved the regularity of occurrence and development of religious believes (A. Gulyga), without recreating the mechanisms of religious action itself that was accepted by one part of his followers as atheistic teaching and by the other part – as the undeniable existence and explanation of indestructibility of God.

There are enough reasons for the study of the world-view and ideological principles of general management theory. Firstly, these are the ontological reasons. They consist in the fact that the modern science exactly shows that the technical, the biological and the social worlds are closely connected by the attribute human qualities, and here operate the same patterns in the field of management.

Secondly, the environmental causes, which now threaten the existence of the international community by the large-scale disasters, are the result of poor management of technical and biological systems on which the principles of the technical management have been transferred.

Thirdly, the praxeological reasons, because in the context of globalization and globalization of the contemporary social world the large-scale transformations essentially actualize the problem of justification of the most effective forms and methods of managerial cooperation in the systems of management of different areas and hierarchical levels.

Fourthly, the cognitive reasons are laid in the idea that the management theory, which has the logic of the formation of generic-



aspectual concepts and three types of reflection: elementary, scientific and philosophical, cannot be created violating the general levels of epistemology. H. Gegel formulated the regulating role of the philosophy: «Philosophy manages ideas, and they rule the world».

Fifthly, there are formational reasons. The basis of disorganized capitalism and socialism/communism like it was in the Soviet Union is the crisis of the management which was caused by the maladjustment of the management systems to the conditions of an open society being.

Sixthly, there are actual general civilization reasons that engulfed all sides of the planetary life forms and steer it in a single evolutionary direction of social development.

Seventhly, there are reasons of national extraction, because the transformation of Ukrainian society and its integration into European and world area require the appropriate scientific support like a cancellation of the old ones and creating a number of new organizational structures and management techniques.

Eighthly, there is now the competition in the field of development of the general theory of management, as the corporative management has overshadowed the cybernetics and social management and is trying to encompass the extrinsic areas such as public administration.

Ninthly, there are human reasons, because there is no program of training, retraining and advanced training of managers in the algorithm of the stable disequilibrium to which the global economy is transforming.

Tenthly, the philosophy apriori is designed to find the common ideological and methodological grounds and the corresponding ideology to explain the organizational cooperation in the globalized society.

In the eleventh, the educational reasons require the updating of the content and forms of the professional training of the new generation of management specialists.

The severity of the problem is increased due to the following factors: a) the substantive unity of the technical, biological and

social systems; b) the establishment of the informational and organizational unity of the international community; c) the dependence of the management on self-organization and self-regulation of natural processes that land people in certain limits of the organizational behavior; d) the people's need to continue the synchronizing, the planning and the developing not only their own development, but also systems that serve it and in which it self-realizes (technical and social ones).

The state of the scientific research of the problem causes some concern because of the lack of fundamental research of the problem; the source base of the study is dispersed and requires the special analysis. It is clear that the source base foundation was founded during the formation of cybernetics as a science. Among its founders there are: Andre Marie Ampere (1775–1836), Vyshnegradsky Ivan (1831–1895), Norbert Wiener (1894–1964), William Ashby (1903–1972), Heinz von Forster (1911–2002), Claude Shannon (1916–2001), Gregory Bateson (1904–1980), Alexei A. Lyapunov (1911–1973), Victor M. Glushkov (1923–1982), Stafford Beer (1926–2002), Axel I. Berg, Lev T. Kuzin (1928–1997), Geliy N. Povarov (1928–2004), Konstantin A. Pupkov (born 1930), Andrei N. Tikhonov (1906–1993) and others.

In the earlier period the philosophical aspects of cybernetics were concerned especially by Klaus Georg (1912–1974) – German writer of famous works «Cybernetics and Philosophy» (1963), «Cybernetics and Society» (1967) [211, 212]. We may add to this the works by Ludwig von Bertalanffy, V. Nalimov [316], B. Biryukov [60–61], I. Novik [321] I. Makarov [261], O. Moroz [304], B. Petrov and B. Pekelis [343], B. Ukraintsev [469], V. Parin, A. Spirkin, E. Geller [337], M. Zhukov [173–174], V. Veselovskiy [91], S. Ivanov [184], Z. Rovenskiy [387], S. Shalyutin [519], A. Ursul [475] in this field.

It is sad to know that for a long time Marxist-Leninist philosophy rejected the cybernetics as pseudoscience and didn't work with it. «Even well-known representatives of the exact

sciences – according to H. Claus – initially were rather skeptical about the cybernetics. But the period of general uncertainty finished quickly» [212, p. 13–14].

There are certain scientific works on this problem of our native authors. These are researches by I. Shavkun [518], V. Pavlov [334], S. Popov [359], B. Shevyakov [523] and others.

Experts are trying to create on their own a philosophic type of management. Here we can mention a work by Oliver Sheldon «The philosophy of managing» (1924) [569], works with the same title by Russian authors L. Golubkova and V. Rosin [389], A. Nazaretyan [314], I. Bogachek [63], P. Shchedrovytskiy [531], publications by V. Diyev [151–153], B. Sokolov, E. Tsyvirko, R. Yusupov [423], V. Mirzoyan in such magazines as «Voprosy Filosofii» (“Issues of philosophy») [298] and «Проблемы теории и практики управления» (“Problems of theory and practice of managing») [296-297], by our native authors V. Kremen’ [226; 424], V. Bekh [22; 47; 398], V. Voronkova [99], V. Lysyi [259], O. Mugolatiev [290], O. Ponomarev [353–359], I. Shavkun [518], S. Popov [358–359] and I. Goncharenko [130], a great amount of publications about Japanese philosophy of production management [445] and especially of staff management [546].

For practitioners a lot of books are recommended [164; 457; 485], and there is a working web-site [484]. A pleasant exception is a collective work of our native authors V. Kremen’, S. Pazhynich and O. Ponomarev, which is called «Philosophy of management» (2007) which is approved by the Ministry of Education and Science of Ukraine as a manual for the students of higher education institutions [227].

After losing by cyberneticist a leading role in the foundation of the integral theory of managing, the researchers weren’t interested in it, and started to develop only its separate components: a) philosophy of technology, b) philosophy of biological systems, c) philosophy of social systems. In the sphere of philosophy of technology this set of problems was fixed with technocratic thinking and corresponding culture and ideology. Technocratism as a subject

of analysis wasn't purposefully reviewed, but its control component in science was examined in works by X. Arendt, B. Berri, M. Veber, E. Giddence, R. Dal', X. Lassuell, S. Luks, K. Marx, C. Merriam, T. Parsons, B. Rassel, D. Rong, M. Fuko, P. Morrice and others. Works which are connected with different aspects of power are presented by V. Andrushchenko, O. Babkina, L. Bayrachna, V. Bekh, I. Vasyliiev, V. Gorbatenko, R. Zymovets', I. Kresina, M. Kalinichenko, I. Kuras, Yu. Levinets, V. Ledyaiiev, V. Ledyayeva, M. Myhkalchenko, V. Pazenko, K. Raida, Yu. Romanenko, F. Rudych and others. The basic fundamentals for researching the technocratic mind in our native philosophy were established by the members of Kyivan philosophic school (M. Bulatov, V. Knyazev, S. Krymskiy, A. Loi, V. Lyakh, R. Martynov, V. Shynkaruk).

Certain source base is also accumulated in the sphere of biological systems philosophy. Here we can mention monographic works by I. Shmalgauzen [528], Yu. Gorskiy [132–133], M. Matvieyev devoted on issues of self-organization of prebiological and biological systems [278], A. Melnykov on issue of biocybernetical systems [282], V. Fedorov on connection of physiology and cybernetics [478], V. Yeskov [171], V. Zilov, A. Aidaikin [5], I. Dobrynin, V. Lazaryev, A. Hadartsev – about new directions in clinical cybernetics.

There are also developments of the researchers in the sphere of philosophy of social systems in which the philosophical basics of management are revealed. For example, N. Sledniayeva has works on social cybernetics [416], V. Andrushchenko [16], V. Kremen', D. Tabachnyk and V. Tkachenko [470–471] – are creators of works about the organization and self-organization of society, V. Anohin, N. Bozhko, N. Morozov have works which reveal the cybernetics of the second order [18], I. Ladenko, V. Rozumov and A. Tesminov created the intelligent basic of systematization [242], A. Koliesnikov and V. Yakovliev are the authors of works which consider cybernetics as a predecessor of informatics [207; 216],

A. Cherep and K. Potop are the authors of reengineering as a philosophy of management [513], I. Tsykunov is known for his work about the informative environment of society [512] et al.

The source base got a separate systematization during the analysis of humanity management philosophy [99, p. 11–13] in the context of developing the history of philosophical thought. Several theories of western philosophers should be named, in the context of which only separate ideas of humanity management were given. These thoughts are common in theories of «human side of enterprises» (Douglas McGregor), «work motivation» (F. Gertzberg), «revolution in consciousness» (A. Pechcheya), «revolution of hope» (E. Fromm), «hierarchy of needs» (A. Maslou), «psychotherapy in practice» (E. Frankl), «people's relationships» (E. Meyo, W. Dikson, F. Rothlysberg), «new people's relationships» (R. Bekhard, R. Blake, J. Mouton), «hygienic motivation» (F. Gertzberg), «four systems» (R. Laikert), «situational administration» (M. Gersi and K. Blanchandra). In the view of already said, we need to add that in the conditions of globalization there appeared a great need in research of this new science direction, which can explain all the problems of human development both, at the regional level and on global level, in order to overcome great deformations, which appeared at the beginning stage of the process of modernization.

Socially-anthropomorphous basics of the humanistic management philosophy analysis are represented in works of classics of socially-humanitarian and managerial sciences, such as: a) institutionalists (T. Veblen, A. Helen, J. Bernard, L. Thompson, T. Parsons, J. K. Gelbrait, J. Commons and others); b) neoinstitutionalists (D. Nort, R. Cause, J. Bukenen, P. Riker, O. Williamson, A. Stepan, E. Ostrom, P. Hall); c) in «sociology of development» (D. Lerner, U. Mur, A. Etizioni, U. Rostou, E. Giddens); d) «political science of development» (G. Almond, L. Pay, S. Gattington, R. Inglegart).

Attempts to characterize the common theory of managing technical, biological and social systems were undertaken at various times during almost the whole XX century until now. To ensnre that



this statement is true, we just need to follow the destiny of such well-known theories as: a) common theory of organization (tectology by O. Bogdanov); b) the common theory of systems (systemology); c) the common theory of management (cybernetics); d) systematical social theory (social systemology by Yu. Riezyk) and others.

According to Yu. Riezyk, for instance, we should consider the three other theories mentioned earlier in this work as «the most general theoretical premises of social systemology» [384; p. 298]. We do consider that the systemic social theory (social systemology by Yu. Riezyk) doesn't have its conceptual core, so it won't be studied in this research [384]. The works mentioned above make up the first level of the most grounded doctrine, which is able to contribute to the development of general theory of managing the technical, biological and social systems.

Cybernetics is almost one of the theories working hard to master the selected subject of science; it has passed through several development stages, and it acquired a new quality at each of them. The base of this theory consists of three principles, which give us possibility to refer one phenomenon or another to management: a) the availability of the process of transmission, handling and storage of information; b) existence of teleological effect or goal setting; c) existence of feedback mechanism to correct goals setting activities. Cybernetics explores patterns of functioning of the management mechanisms, which have already formed, but not their development through the processes of self-organization, as self-organization is the subject of synergy [218, p. 98]. Science literature gives us three stages of its forming: pre-cybernetic, systemic-cybernetic, post-cybernetic (modern) [455]. V. Styopin and V. Arshynov distinguish classical, non-classical and post-non-classical approaches.

Now, we can observe some underestimation of management, which is fatal for social development. We can explain it by the lack of tool chain appropriate to the regularities of the new stage of the world community development during the transition period. Especially it was revealed, when the functional systems became the



subject of science. Proof of this is the anti-system movement of the management thought, which is directed against the strictly technological management and against the transference of the system analysis and cybernetic models on social organisms and organizations. It isn't structural yet and manifests itself as a protest. The matter concerns the existential theory of management by J. Odiorne and anti-system approach to organizing and management by K. Wake, R. Greenwood, A. Pettigryu, S. Robins, B. Rowan, S. Renson, B. Hudoba, D. Silvermen, B. Haydyngs and others [See: 455, p. 54]. All these authors are common in methodological position based on the existential philosophy and phenomenology of E. Husserl, entometodology and symbolic interactionism.

Certainly, there are also sprouts of new approaches to the formation of the methodological base of researches in the world, which becomes unstable and specific. Today the search of new administrative paradigm moves on a broad front: there is an active deepening in the history of administrative thought, management is associated with civilization changes and globalization processes, with the spiritual revival of society and person, with power and political stabilization, with the problems of attainment of economic efficiency and social justice [See: 38, 185, 293, 474]. At other level among the most widespread approaches we can distinguish: a) economic; b) politological; c) sociological; d) psychological approaches to determination of philosophical features of social management.

The analogical ideas, which were accumulated and worked up by science of state administration, should be examined separately. In foreign and home literature, it is easy to find the corresponding plots, which distinguish its meaningful characteristics and, correspondingly, the divergences with a notion «administration». It is highlighted that a rather substantial difference between two concepts consists in the fact that this concept means «to serve, to satisfy», and «management» – means «to control, to achieve the results». In other words, on the one hand – there are «service, duty

and practice», on the other hand – there are «results, efficiency, purposefulness and science» [570]. According to these definitions, we receive the following: «administration (administrating) gives substantial advantages to such aspect as following by the services the instructions, while a management priority is: a) achievement of results; b) personal responsibility of a manager concerning the achievement of results» [459, p. 49]. More detailed information on correlation of these semantic units we can find in scientific work «Educational politics (review of order-paper)» by V. Andrushchenko and V. Saveliev [17; p. 155–177].

At the third stage particular ideas are accumulated and on their base we could create firstly – a paradigm, and afterwards – a conception, and finally – a general theory of management the technical, biological and social systems [19, 64, p. 113, 127, p. 10, 12, 202, 239, p.72].

There are other original approaches to creating general theory of management. For the present the single theory of management is not developed yet; M. Angolenko suggests to do it on the basis of the idea of K. Pavlov about the system of main functions (SMF), or, according to the author – MFS (Main Fastens Systems) [14, p. 11–12].

As a source for development of the general theory of management, it is possible to examine the known theory of equilibrium [448], which was defended by O. Konte, H. Spencer, E. Dyuryng, K. Kautskiy, A. Bogdanov and others, which in the USSR was appraised as a hostile to Marxist-Leninist philosophy, vulgar-mechanistic and anti-dialectical theory that carries over to all phenomena of nature and society the law of equilibrium that operates in industry of mechanics». The supporters of the theory of equilibrium consider equilibrium the natural and «normal» state, while motion, development – temporal and passing. This theory sees the source of motion in the struggle of outer opposite forces. The theory of equilibrium denies inner contradictions of objects and phenomena and the struggle of inner contradictions as a source of development.



Simpler picture appeared in the sphere of the professional training of manager personnel. According to P. Drucker words, «the work on increase of the productivity of brainworkers has just begun. In 2000, we were approximately at the stage, where our workers (according to their productivity) were in 1900» [158, p. 180].

Except that, we should note that a lot of foreign authors, forecasting the perspective of development of management and trying to estimate its achievement during a century, even don't rise to the level of understanding the necessity of development of general theory of management the technical, biological and social systems in the conditions of organizational and informative unity of world community.

Thus, the working out of the ideological and methodological grounds of the universal management activity – of its object, principles, methods, means and other basic notions – is exceptionally actual problem for today.

The problem situation of the development lies in the necessity of the grounding the entire conception of the world view and ideological principles of the general theory of management, in view of which there are three types of organizational interactions: technical systems management, biological systems management and social systems management, in other words, there appears the necessity to reduce the existing in practice paradigm diversity of knowledge about management to common notional denominator – the generic concept «management».

It's necessary to distinguish the object and subject of study to have a subject field of research. Thus, the object of study is the totality of organizational relations that penetrate into all spheres of social life of modern person and are presented in the theoretical field as the diversity of management paradigms that include technical, biological and social systems. In turn, the subject of the study includes the philosophical principles of forming a general theory of management of the technical, biological and social systems.

It is necessary to determine the main hypothesis of the study – the paradigmatic knowledge about the types and varieties of organizational



relations in technology, biology and the social world that was accumulated by the international community can be reduced to unitary meaningful picture at the higher level of the conceptions formation due to philosophy cognitive potential of management that should explain their genesis, world view and ideological components and the main philosophical characteristics: nature (subjectivity), essence, content, form, ontology, morphology and functionality.

The aim of this monograph lays in the philosophical comprehension of the general theory mechanism of management of the technical, biological and social systems integral conception formation.

The structure of monograph has six specialized chapters that solve the following problems:

- to specify the sense of the main concept of the study «general theory of management»;
- to show the formation of the general theory of management as an acute social problem of today;
- to analyze the scientific approaches to the study of phenomenon of management;
- to form the methodological principles of the general theory of management analysis;
- to develop the social and philosophical matrix to study the formation of the general management theory;
- to analyze the world view and ideological component and the state of development of the philosophical principles of management of social (functional) systems as a part of the general management theory;
- to analyze the world view and ideological component and the state of development of the philosophical foundations of management of technical (material) systems as a part of the general management theory;
- to analyze the world view and ideological component and the state of development of the philosophical foundations of management of biological (living) systems as a part of the general management theory;

- to realize a comparative analysis of management of technical, biological and social systems in the context of formation of the general theory of management;
- to determine the contradictions and leading trends of modern stage of the formation of philosophical principles of the general theory of management.

Methods of study. The basic methods of study of the philosophical principles of management are: morphogenetic method that studies the form and construction of any object; synergistic method, which is used for the analysis of administrative links as nonlinear system; comparative method, which analyses different forms of administrative ties in natural, technical and social systems; historical method that shows the dynamics of management ties formation in the temporal coordinates of a particular historical epoch; phenomenological method that allows to understand the essence of management as a contradictory phenomenon, trying to recreate its integrity; system method, which discovers the structure of management ties as a dynamic system that assists in self-development of technical, biological, and social systems and their self-regulation; dialectical method, which makes it possible to consider the development of management in the process of interaction with the environment and personality; general scientific methods of analogy, analysis and synthesis, ascent from the abstract to the concrete, which contributed into understanding the philosophical foundations of management; heuristic modeling, which is for verbal descriptions of conceptual approaches to the formation and development of various management systems; comparative method, which is for comparison specific systems of management formed on different theoretical and methodological principles; structural and functional method, which discovers the basic characteristics of management mechanisms, interdependence between technical, biological and social systems; the aim of method of scientific abstraction and non-linear (non-determined) thinking is to show an interaction of direct and reverse connections in linear

(Object-Object), (Subject-Object) and non-linear (Subject-Subject) systems; complex method, which is provided with perceiving management ties as a means of forming the integral theory of management of complex systems; economic-mathematical method, which is for construction of the prognosticate model of management of three different systems in all parts of life of the social organism; method of anthropological expertise is aimed at detection humanistic component in management, in the center of which there is a «human as the measure of all things», and the elucidation the place and role of personality in the field of objective research.

Theoretical importance of the investigation lies in the fact that we can use the received results in the solution of theoretical and practical problems of detailing of the offered by the author content of the general theory of management, especially the management of technical, biological and social systems. First of all, the idea of the perceptual unit has an objective to the perception of the ontological unity of these types of management, and therefore it requires overvaluation of the place and role of personality in the Universe, and it exposes the possibilities of generalization of ideological principles of the general theory of management, because the technical, biological and social systems are the products of the one subject – a human. Secondly, the affluent heuristic potential includes the offered by the author mechanism of formation of the philosophic base of the general theory of management. Thirdly, the author puts forward the idea of impossibility of realization of management of technical, biological and social processes under the aegis of one of extant ideologemes nowadays, which means: technocratism, eco-humanism and humanism, which directs us towards searching and theoretical argumentation of the ideology of dynamic balance in managerial activity, which has too mobile boundaries in circumstances of consistent unbalanced development of the planetary community, and it is also too sensitive concerning ratio of technocratism, ecohumanism and humanism. Fourthly, the resulting from the comparative analysis proof of the incongruence



of the mentioned above trends of management activity in the ontologically single social world confronts the science with the question about theoretical mastering of managerial activity by generalization of the phenomenon in the much higher logical level, i.e. the reasoning with including into science a new conception, which leads to the automatic differentiation of the acquired by the world community knowledge concerning administrative activity and requires from the science the inclusion into theory of management the idea of three-level being of organizational relationships, which ontologically, functionally and cognitively shows the unity of the structure of knowledge of the theory of sociology and of the general theory of management: the subject of management completely coincides in the horizon of social management with the object of management.

Practical significance of the received results is conditioned by the introduction into the theoretical heritage the three products of this research: 1) the cognitive mechanism of the general theory of management formation; 2) the structure of the general theory of management, which is in harmony with the structure of sociology; 3) educational subject «General theory of management», and also the possibilities of using some particular theses and ideas in the elaboration of educational subjects in the system of the high professional education, for example, «Philosophy of management», «Management of organizations», «Social management», «Administrational management», «The system of the local self-administration and self-government», «Administration of the organizational changes», «Management of educational institutes», «Management of the ecology», «Management of the technical systems», «Management of complex systems and networks», «Informational management», «Theories of resolving», «Situational management», etc. Classification of extant paradigms has additional meaning depending on the condition of social systems such as: homeostasis, homeorhesis and homeoklasis.



Chapter 1

HISTORICAL AND METHODOLOGICAL PRINCIPLES OF THE GENERAL THEORY OF MANAGEMENT

1.1. The general theory of management as the main concept of research

The task of this chapter is to specify the concept of philosophical principles of forming the general theory of management of technical, biological and social systems, i.e. to outline the object of study. We proceed from the fact that the term «concept» (from Latin. *conceptus* – concept) is the meaning of the concept. Its semantic filling is in abstraction from the specific linguistic form of its expression [320, p. 503].

In other words, the concept is a logical-intuitive scheme of studying the problem, establishing the connection between its elements, and the conceptualization is a special form of perception (cognition) reality [486, p. 262]. Therefore, it is essential to uncover the meaning of the research subject which is hidden in an integrated

expression «philosophical principles of forming the general theory of management», and simultaneously the limits of the research field.

To develop the philosophical analysis of the subject of this study it is necessary to make one important clarification. In the case of the general theory of governance, we mean the content which is implied in the dictionary in the term «cybernetics», but with some differences. We'll explain what the main point is.

Cybernetics (from ancient Greek *Κυβερνητική* / *kybernetike* – «the art of managing»; *kybernao* – «steer, govern»; *kybernētēs* – «helmsman, governor», in particular from this root such English words as «governor» or «government» originate) – is the science of the general laws of management processes and transfer of information in the systems of animate and inanimate nature of natural and artificial origin. The ancient Greek philosopher Plato was first to use the word «cybernetics» (Gr. «the art of steering») as the term for management in the general sense [210]. Another definition (V. Glushkov) – says that it is the science of the general laws of receiving, storage, transmission and transformation of information in the complex systems of management.

Considerable contribution to the establishment and development of cybernetics has been made by known Ukrainian scientists M. Amosov, P. Andon, A. Anisimov, I. Voytovych, V. Glushkov, V. Gubariev, V. Deyneka, Yu. Yermolyev, M. Zgurovsky, A. Ivakhnenko, I. Kovalenko, V. Korolyuk, Y. Kryvonos, V. Kuntsevych, S. Lebediev, A. Letichevskiy, I. Lyashko, A. Morozov, A. Palagin, V. Red'ko, I. Sergiyenko, V. Skopetskiy, V. Skurykhin, K. Yushchenko [210].

Therefore, we consider it appropriate to further separate the terms «cybernetics» – as the science about information exchange in the management of technical, biological and social systems and between them, and «management» – as the science about the organizational human interaction from the perspective of three different sites and between them, as well as having different tools and technologies. Formation of a new research direction in the science of law – information law – establishes the difference between these phenomena in law.



We begin our analysis of the main concept by clarifying the term «philosophy», as we can start the solution of the problem situation underlying the research with any concept. However, the law of working time economy requires starting the analysis from this particular item. It would seem that there is no problem, but this is not the case and it is not an easy task, as the authors of French «Dictionary of Philosophy Language» suggest 60 definitions of «philosophy» [555]. However, in our opinion, the existing wordings of philosophy are well summarized in «Encyclopedia of Philosophy» (1970): it is «a form of social consciousness, aimed at developing a holistic view of the world and man's place in it, which studies the ontological, epistemological, axiological, aesthetic and ethical aspects of «subject-object» relationship» [481].

What is the cognitive potential of philosophy, and what is the essence of philosophical analysis? During the division of philosophical and scientific subject of the research such methodological principle as reflection is used. In the «Philosophical Dictionary» (2006) it is stated that there are three types of reflection: elementary, scientific and philosophical. Elementary reflection returns the subjects to the self-examination of their actions and knowledge. Scientific reflection is focused on the analysis of techniques and methods of cognition used in a particular field of research [487, p. 809]. Philosophical reflection except the critical principle that allows us to describe, explain and predict the effects of regularities, forms the principle of heuristic knowledge, that is serves as a source of knowledge. This is due to the fact that the «philosophical reflection is focused on the awareness and understanding of the limiting grounds of being, thinking and human culture as a whole» [487, p. 717].

It should be added that the analysis of the concept is the force with which the philosophy affects the science. This is confirmed by G. Hegel who to the question what philosophy is replied: «The peculiar feature of this science is that in it its concepts only, perhaps, are its initial, in fact the whole consideration of this science



is the evidence and we can say actually finding this concept; the concept is essentially the result of this consideration» [104, p. 8].

Philosophy, though closely associated with science, but is not identical to the latter. «Science is the sphere of human activity, the purpose of which is to study objects and processes of society, thinking and nature, their properties, relationships and regularities; it is a social institution that provides the production of knowledge, its storage, use and change, the system of knowledge about the laws of nature, society and thinking development, as well as a separate branch of such knowledge. More generally, science is understood as the objectively accurate and systematic knowledge about the phenomena of nature and human life, represented in terms of their regularities and permanent order» [487, p. 582].

Philosophical determinants, and we study them as principles, make up what we call the philosophical basis of the theory of management. In this study, we distinguish between the concepts of «principles» and «basis» in such vein, in which they are used in the legislative decree of Ukraine [177]. For us, the term «basis» (foundations) is broader than the concept of «principles». In addition to philosophical foundations, the theory of management has other determinants.

Therefore, the phenomenon that lies in the term «basis» is something that for the subject of the management theory is genetically provided, ontologically undisputed, that preconditions the main features of its essence, of the limits of its space-and-time being, that provides a constant dynamic unity of its structure and content.

This is due to the presence in the management phenomenon, as in everything in the world, the causes of its appearance, its development and functioning and the management theory studies them. But apart from them there are also the reasons for these reasons. In other words, there are general grounds of the managerial reality being. Having a metaphysical, ontological, culturalogical, anthropological, existential nature, these reasons, (we refer to them as to the basics of forming management theory), are not the subject



of pure management theory, but are the subject of philosophical reflection.

Thus, the philosophical principles are a set of determinants of the management theory formation, which are under investigation and engaged in action in the course of spiritual production. Then we'll come back to that point and suggest the items of production, which on the one hand, are the products of philosophical analysis and set up its philosophical basis, and on the other hand, they confront metaphysical, ontological, methodological, cultural, anthropological, existential, and other factors.

The term «formation» requires a separate analysis. The «Explanatory Dictionary of Great Russian Living Language» by V. Dal' gives the definition of the term «to form» as something that has its own ontology and means «to gather, build, compile, add to the whole» [142, p. 538]. The dictionary of foreign words, edited by V. Liokhin and F. Petrov it is presented in two ways, namely: a) to establish, b) to form. This means that during the special study of the process of management of technical, biological and social systems it is necessary to reveal to what the harmonic form is given and what kind of form, and also what to create and in what way.

According to the content, the term «formation» is the process of shaping something, in a broad sense under formation we understand any process where stability, completeness, specific type is given to anything or creates, organizes, schedules, connects [495]. By nature, it is a spontaneous process without restrictions in time and space, without nationality, as opposed to rational process of management, in which mandatory elements are target, subject, period of performance, and means of realization and other parameters of the design activity.

In this case we shall emphasize that the definition of social management problem is fundamentally different to the definition of social task. The difference is that there are no means yet to solve the problem and this is qualitatively different from the task, solution of which will always have the means. Karl Marx says: «The problem



itself occurs only if the material conditions for its solution are already available, or at least, are in the process of formation» [271, p. 7]. In some another abstract K. Marx expresses his thought about it more categorically, namely: «The problem occurs simultaneously with the means of its solving» [273, p. 98].

Analyzing more deeply the subject of our research, we will specify the notion «management» which does not coincide with the term «organization». The question of the separation of the theory of organization and the science of management in the researches being carried out and the published works is solved ambiguously [292].

The meaning of the concept of management can only be revealed through philosophical categories of causality and feasibility, structure and function, and several others. Therefore, the term «management» is extremely complicated even if it is not placed synonymously alongside with the term «organization», as it relates to technical, biological and social systems.

Any sense can be unpacked. On this occasion Gegel wrote: «The concept for its development would not require any external incentives; its nature, involving a contradiction between simplicity and difference and therefore restless, induces it to self-realization, it makes it to unfold and to make real the difference that exists within it only in ideal way, i.e. in a contradictory form of something indistinguishable; in this way it results in the situation when by withdrawal of its simplicity as a certain shortcoming, a certain unilateralism to make it really intact i besides it initially includes only ability» [113, p. 12].

The term «management» has at least three discourses: of technical, biological and social origin and purpose. There are known dictionaries on management of the technical and social systems. We have to decide as for its integrated form and consider it as the conflict (contradiction) of social being.

Thus, we consider the philosophical discourse not just as the use of a categorical means serving human activity and its entities, but as a symbolic representation of the phenomenon of management in

general, as its production, its theoretical justification of its system integrity and links with the outside world by the example of such geological processes as technocenosis, biocenosis and sociocenosis.

Even *ex facto* relating to the reflection of the management in this dimension indicates that it now requires immediate attention of philosophers and theorists, because: a) it is in crisis, as evidenced by the current state of technology (e.g., Chernobyl meltdown (Ukraine, 1986), Fukushima (Japan, 2011), the crash of «Challenger» (USA, 1986), the outbreak of the AIDS epidemic in the world (1999) and other disasters of bio- and socio-sphere) b) recommendations for its modernization do not have generalized nature but are aimed at solving small problems of practical tendency. That is what Professor A. Tikhonov said about this: «There has formed – he writes – a huge market of recommendations to practical workers, about the way how best and more efficiently conduct their business. One «panacea» is competing with another, and yet there is no consensus in science on the nature and functions of management, its distinctive features and qualities. It seems what may be easier? – first tell what management is, and then how to improve it» [455, p. 32].

Therefore, before proceeding to study the philosophical foundations of management, we have to decide on its definitions. There are many opinions, and therefore the definitions regarding this phenomenon. The most radical ones are the views of mathematicians working in the field of cybernetics, and social managers serving the institutional needs of the state, civil society and market economy. We proceed from the fact that management is considered as the «incorporated in social process deliberately designed socio-cultural mechanism for the regulation of relations between the participants of joint activity, combining their interests, organization and self-organization, formal and informal norms, the achievements of productive goals and sustainability of social relations» [455, p. 260].

There was certain confusion made by the observations and subsequent interpretations of many natural phenomena that outwardly resemble management. For example, a renowned expert



in the field of management philosophy, Academician V. Afanasyev in determining the nature of management in the «Big Soviet Encyclopedia» says that it is the «elementary function of organized systems of different nature (biological, social, technical) that provides maintaining of their defined structure, support for the regime of activity, the realization of the program, the purpose of activity» [74, p. 33].

More precise, in our opinion, is the definition proposed by A. Spirkin, according to which, «management is a function of any organized system aimed to maintaining its quality definiteness to supporting dynamic equilibrium with the environment, and to its development». The author considers management to be a kind of response to «the full amount of information interactions of the system» designed «to providing it such behavior and condition, such structural organization and tendency of development that would meet all the information stored by the system and take into account its objective needs. « In this context, he considers management to be focused not only on the information past of the system, but also on its future [433, p. 435].

Rather close to it but more clear definition is given by the Belarusian authors M. Dyachenko and A. Kandybovych, who assume that the management is «a function of organized systems that provides preserving of their structure, support of the mode of operation, the realization of activity program» [163, p. 440–441].

Recognition of the need for philosophical reflection of the phenomenon of management has also found its place in the national and philosophical literature. For example, a dictionary of social terms interprets management as a specific function of «special organized systems of nature, society, industrial and mechanical sphere, which provides their vital activity, purposeful dynamics of their development, the implementation of specific programs and practical tasks» [492, p. 605].

The Donetsk researchers of management philosophy such as V. Alekhin, V. Burega, S. Povazhnyi and L. Alekhina believe that «in a broad philosophical sense **management** is a fundamental



general functional property of the objective world, organic and inorganic nature, conscious and natural forces, in which are inherent quality of patterns (regularities), purposefulness, goal-setting and focus on result of the action» [486, p. 13].

Here are some other definitions that were in the dictionaries and encyclopedias on Management – «the element, the function of organized systems of different nature: biological, social, technical, providing the safety of their certain structure, maintenance of the mode of activity, the implementation of the program, of the activity goal» [489, p. 704]. This definition also covers the subject of our study, and it fits into the problem field.

Management is the «steering of movement of anyone / anything, guidance of the actions of anyone» [330, p. 683]. Management is the «impact on a governed system to provide its required behavior» [322, p. 9].

Awareness of this phenomenon occurs in the context of a global outlook. «Dominant global outlook is a management imperative, or a relationship to reality for which there is a natural desire to understand any problem to its practical solutions,» – said V. Terin [450, p. 106]. It is caused by permanent-crisis nature of modern human existence, the awareness of which cannot lose control of global processes and thereby prevent a global catastrophe. This understanding of governance («governance») within the meaning of responsible government is easily confused with a simple exercise of the powers of management («government»), but these concepts are separated from one another.

Rigid mathematical logic of management in techno-sphere, the lack of conceptualization in the sphere of management of biological organisms and their organizational associations, scattered ideas and conflict of concepts on social development, especially in the political sphere, are pushing us to seek general theoretical framework of organizational interaction [466]. Management philosophy will serve us as our cognitive tool that will help to search for them.



It is not necessary to talk about the number of concepts in the field of social management. There are several dozens of them and every year there are more and more of them. To check this, just look up in the dictionaries of management or study the works of our authors: «Modern management theories» by M. Tulenkov (2007) [465], «The philosophy of humanistic management» by V. Voronkova (2008) [99], «Theoretical foundations of rational way of social management» by M. Tulenkova and A. Chuvardynskiy (2009) [467] et al.

Techno-sphere and socio-sphere are products of human's activity as a representative of the biosphere. That is, the same substance exists in different organizational and substrate forms. They are doomed to social interaction, including the organizational. «We believe – says Alexander Tikhonov – that governing connects ontologically different realities by introducing causal relationships between them, resulting a natural process into a state of integrity, which is deliberately developed and directed» [455, p. 171].

This is about the formation of scientific management theory [495]. Positive attitude for a general theory of management had, as you know, the Frenchman Anry Fayolle (1841–1925) and the Russian A. Bogdanov (Malenovskiy) (1873–1928).

In 1916 Anry Fayolle published the work «General and Industrial Management» [476]. In it he generalized elaborated governing schemes, creating a coherent, logically balanced systematic management theory.

Subsequently, A. Bogdanov more fully lodged a similar idea in the famous book «Tectology. A Universal Organizational Science» (1912) [64–65]. «Any human activity is objectively of organizing or disorganizing character. This means any human activity – technical, social, cognitive, artistic – can be regarded as a certain material of organizational experience and explored from an organizational point of view. In everyday language, the words «organize», «organization», «organizational activities» are provided with narrower sense, more special. But if we want to give the notion of

scientific certainty and accuracy, this everyday sense cannot be kept as vague and [it must contain] inconsistencies – confusing, unclear and contradictory» [64, p. 69]. A. Bogdanov for a long time, namely from 1912 to 1928, had a «pervasive monistic focus: search for institutional relations of the world whole».

The idea of the universality of science was perceived in Russia in the early 20th of the XX century as the ideological confrontation to materialist philosophy. It received the classics of Marxism, even own definition – «empirio monistic philosophy by B. Bogdanov» [64, p. 19]. With regard to the idea of universality, Bukharin in 1920 Lenin wrote: «Before Bogdanov there was the position recognition philosophy. Now he destroys the philosophy. ...«Tectology» is, according to Bogdanov, the replacement of philosophy [64, p. 19]. It was a back view of Marxist philosophy through to management.

Now we face a world view and ideological and methodological problem of integrating the above content of the three discourses that exist in management into a single consistent picture upon which it is possible under conditions of organizational unity of the international community to create a general theory of management of social development.

We believe that there should be used a methodological tool that introduced to science Michel Foucault – the concept of dispositive [499, p. 338]. In the methodological part, we will present more fully the concept, because it plays a leading role in the «construction» of a consistent picture of control of the technical, biological and social systems.

Thus, we can form a major concept of study. Based refinements can be made to identify specific «management philosophy», the intellectual area where the interests of philosophy and cognitive control intersect: it examines the concept of the place and role of human – subject in the control system, and forms and methods of their realization in the functioning and development of management systems.



As an independent philosophical discipline «management philosophy» is based on a dual basis – formal and substantive nature. Trying to formal reasoning inevitably results in a repetition of already shared in his time by time Friedrich Schelling argument on the right to independent existence of other philosophical discipline – «the philosophy of art». We know, he says, as «shamelessly abuse the notion of philosophy». The combination of the words «philosophy» and «art» seems to be connecting the opposite effect – the ideal, subjective, on the one hand, and the objective reality – on the other, but the «philosophy of art» does not cease to be a sphere of philosophical knowledge, because (and until) aimed at characteristic philosophy of «absolute universality» [524, p. 66].

Content argumentation *raison d'ktre* «management philosophy» assumes the analysis of philosophical thought in terms of reflecting the fundamental problems of governance.

Thus, the philosophical principles that are to justify the nature, essence, contents, forms and types of management of technical, biological and social systems, as well as in shaping organizational awareness, organizational philosophy and culture, creating the ideology and methodology of this study is the conceptual basis for practical further development challenges of design work on the basis for the management of technical, biological and social systems in the discourse of formation the information society in Ukraine [177].

Finally, as a conclusion of the consideration above, we'll give answer to the questions, what does the philosophy give to the researchers of management of technical, biological and social systems? The answer is short. Philosophical concepts of any natural science have at least four important aspects:

First, they have ideological and world-view aspect, characterizing mainly the impact of science on the development of philosophy – enriching its laws, clarifying the content categories. One of the aspects of the study of the philosophical foundations of science is to analyze the basic concepts of the discipline. After all, the conceptual apparatus primarily reflects specific subject area that

is studied by means of science. Philosophy has at its disposal tools which can detect specific features of objects «seized» by scientific concepts, to give characteristic to the way in which the definitions of the reflected objects are fixed in these terms, to explore the content and form of the concept and its cognitive function, and methodological significance and ideological role. Analysis of the essence of its fundamental concepts («system» that «controls», «information», «difficulty», «management», «feedback», «model», etc.). Philosophical specification of cybernetics development that, in particular, is related to causality and appropriateness, contingency and necessity, and other very general categories.

Philosophy defines ideology of study of management activity of a man, regarded by us as a set of semantic filters of deductive analysis. It defines a number of fundamental views on governance, namely: 1) examine the value - semantic nature of the phenomenon, and 2) perceives the social organism of the country as a dispositive that integrates technical, biological and social body in organic integrity, and 3) formulates the principle that prevails in the management specific areas, and 4) gives the system of self-regulation of the social organism country that has morphological form of homeostat as the one that: a) balances them among themselves, b) forces them to serve one another, c) provides a sustainable production system functions within the structure of the whole – of the social organism of the country.

Second, methodological that is reflecting the impact of philosophy on the development and improvement of methods and determine the objective content of the basic concepts of science, and ultimately philosophy has a means to identify specific characteristics of objects «grasped» by scientific concepts; to give characteristic to a way in which these notions are fixed definitions of reflected objects; examine the content and form of the concept and its cognitive function, methodological significance and ideological role.

To philosophical problems belong also some methodological problems, particularly those that relate to the application in



cybernetics methods of mathematics and logic, on the one hand and experimental, on the other. The most important philosophical questions of cybernetics are to ascertain its object, method, scope and content of the basic concepts and perspectives of its social, in particular military significance.

Third, sociology explores the social role of human and social conditioning of science society, justifying the subject of study as a social problem.

Fourth, philosophy models possible development of any system as well as possible worlds. Thus, the technical system is modeled more easily than the biological system, while that one - easier than the social one. Cybernetic model of the process is not a symbol, but it is rather true in a required way copy of a real process, which means allows you to take advantage of the general laws of management discovered by cybernetics for searching the ways of improving the efficiency of the development of the planetary community.

The next step is clarifying the nature of the object of our research that is essential for developing the algorithm of the scientific research. If social scientific problem, it is necessary to provide for the design of its solution, and if scientific problem – then to select from the available set of methodological studies relevant tools and begin to address it.

1.2. Formation of general management theory as a social problem today

Purpose of clarifying the multidimensional concept of «forming a general theory of management of technical, biological and social systems as a social problem of our time» is the explanation of nature, essence, contents, structure, shape detection mechanism and conditions for the emergence and development of the general theory



of the structure of global governance in the social organism [52]. Hereinafter, we believe that the concept of «goal» and «task» (objective) are used in everyday life and in politics as synonyms. Meanwhile, the goal determines the direction of the actions and the task – a specific milestone in our quest.

The complexity of perception of the concept «social problem management» is the meaning of the adjective «social». The solution is to analyze the «social» as a phenomenon that «manifests itself in existence as a total process of exchange activities between people, which identifies and establishes itself in practice by collectivism» [44, p. 139]. However, the content of social reality cannot imagine existing without a specific social structure that formalizes and preserves the integrity of the flows of matter, energy and information, as long as they are in the social space and implemented in terms of social time. Organizational form for the smooth flow of social life is the social body. In such terms, the meaning of «the body» seems here «as a great architectonic building like the hieroglyph of reason, which manifests itself in reality» [109, p. 322].

We consider it necessary to provide the following working definition of «forming a general theory of management as a social problem»: a social problem is a form of existence and the expression of the contradictions between the already determined there is a need of social actions – social need to have a mature general theory of management on internal and external condition of modern management system of technical, biological and social systems – and insufficient conditions of urgent need for its implementation in the self-unfolding planetary social body. Thus, the problem is a form of investigator assessment of the general theory of management state.

The elements, which builds a backbone of social problems include: social necessity, social need, social interest, after all, a social contradiction. Listed items are shaping the architecture of a general theory of management as a social problem and «give» it such fundamental attribute as objective character.



The most profound inner core of the problem is social (historical) necessity in comparison with which the problem of management of technical, biological and social systems acts as a specific for social life form of its existence and expression. According to M. Pylypenko, «the necessity under certain conditions – this is a thing, phenomenon, subject in their general relation, the expression of predominantly internal, stable, recurring, general relations of reality, the mainstream of its development» [345, p. 82].

But the inevitability is just one of the types of existence of necessity. There is another kind – a demand. In this regard, the V. Tuharinov stated: «The concept of necessity has two meanings: the sense of inevitability and sense of demand» [462, p. 105]. In addition, the social need that expresses a relationship of the management system to the social organism of a country as an environment of its existence, thereby expressing also attitude to its other elements that should be considered conditions of its existence. «Our needs – as K. Marx rightly wrote – are generated by society, have a social character» [274, p. 446].

Like any self-contained social entity that exists within the social organism of the country, the system of governance as a top requirement is to ensure the integrity of its ontological and functional well-being guaranteed at the stage of sustainable development by homeostasis, and at the phase of transformation to a qualitatively new state of a whole – by homeorhesis of a social whole.

At the next stage of its movement the phenomenon «social problem» as if separates from its carrier – the social body (organism) of the country – and finds direct expression in the environment. The existence of demand of a management system in the environment we know as its social interest. Social interest of management system is formalized as the demand to its own whole; therefore, it is the social organism of the country that can be dispositive.

As such, the social needs of a social whole are formalized as its - the social whole - interest. It is by means of this that the country's



social organism and its control system are combined. This combination is nothing more than a general social interest. It is important to emphasize that «the public interest is – as Marx and Engels wrote in «German Ideology» – not only in imagination as «general», but above all it exists in reality as mutual dependence of individuals, between who the labour has been distributed» [275, p. 31].

Thus, the inherent connection between the control system and the social organism of a country has the activity basis, because each of them has to get activity from another and to provide another with activity of a certain quality. The relationship by means of activity is a constant process whereby reproduction of social relations is done.

So, a social problem arises and is recognized almost unanimously precisely at the moment when the control system does not serve the general interests of the country any longer. Now, it is a reproduction on the higher semantic basis of civil society, academic and personnel provision of the state building process and development of a socially oriented economy of Ukraine. Then it follows from the distinction between content, orientation and nature of the main sections of the population and the quality management system.

This formed the basis of social conflict, which we regard as the ontological basis of the problem management system. Hence, the contradiction is a special, divided into two opposites, state of a social problem. Contradiction is included in the whole process of the problem movement – from inception to its solution. Therefore, the contradiction that lies at its foundation one can say is the core and the mystery of social problems.

The variety of types of conflict determines the variety of types of problems. Now we come to the question of the possibility of interpreting the social problems of governance in the broad and narrow sense. When we define the problem as a form of existence and expression of the need for management to make a certain kind of activity, then we talk about social problems in the broadest sense. In a narrow sense, the concept of problem management is



considered as one aspect of social contradictions. Another aspect is introduced by social conditions.

In conclusion, taking into consideration the above, it can be argued that the development of a social problem or management system is a linear one: necessity – need – interest – contradiction. Acuteness of the contradiction proves the maturity of a social problem.

Now the question arises about the content of the social problem of managing the social whole. The specificity of its content is that the control system is not morphologically distinct from environmental object and a functional body within the structure of country social organism. As it follows from the procedural nature of this phenomenon, the content of social problems is associated with the processes of deformation and break up, dysfunction, arrhythmia and disharmony observed at the stage of management system existence within the country social organism.

Content of the social problem of managing by its definitions, characteristics, structure, movement, using G. Hegel's terminology, are bound to conditions. Conditions supposedly transform your content into a social problem. The problem appears as being conditioned. Conditions at the same time form the behavior of a management system. Transforming the content of external conditions into a social problem leads to modifications or enrichment of functions of a system of management. This process has two types of manifestation. The first type is the modification of those already present, and the second – the emergence of new types of organizational performance. In addition, it should be emphasized that conditions operate as means of solving social problems of management.

Thus, the content of social problems is revealed as the demand of the management system to itself or to the social body of the country and its individual units, such as economics, social, politics, ideology or to their operation quality, direction, character and scale.

Each of the elements of social problems has such attribute as demands that make skeleton of content of social problems –



ontological foundation. Firstly, this foundation has a social nature, and secondly, it is directly connected with the control system, and thirdly – a morphological and functional dimension, fourthly, – heads toward the formation of individual and society, and fifthly – is adequate the higher or organismal level of complexity of the relationship between the individual and society.

Content of social problems are closely related, as we know, to the form to which everything that is definite belongs. Form a social problem, therefore is the content contained in a fixed form and thus becomes available for the researcher's observation.

Form of a social problem emerges before the researcher, as it is said, in being. At the deployment stage, it must «grab» the opposite part and bring back to life the corresponding subjective or objective form. In the phase of being the social problem occurs as a dynamic balance between opposites, until one of them starts to dominate another. At the stage of the being development a social problem gains a form of «withdrawal» of contradiction. These are the three phases of self-motion of «problem» to which we still will have to return.

Movement of social problem of management system consists of moving of conflict by levels of existence of the social world. In practice, long ago there was created a certain stereotype of perception of the line of motion of contradictions development: identity, difference, contrast, conflict. Thus, the movement of social problems affecting all three levels of being social world: micro-level, macro-level and mega-level. However, the movement of attention of researchers' to comprehend the nature of the social problem in practice is in the opposite direction. First, we study a contradiction, then the interest, needs and necessity. Such an algorithm, procedure and depth provide purposeful shift in the exploration and use of management theory: the «hot» tactical to operational and measurable learning effective strategic management of technical, biological and social systems, the structure of an integrated whole – the system of social organism country but management retains also the algorithms of self-organization and regulation.



Social problem of management system has its own structure, since the content consisting of elements cannot be in unstructured form. The main constraints of this structure are the relationships: domestic fundamentals, requirements, conditions for arise, conditions for solutions, a consequence of human activities to address the social problems of higher education. In this case, the main relations of the problem structure are relations between relevant requirements, conditions of emergence and conditions of solving.

The structure of social problems always provides its primary function, which is the regulatory influence on people's behavior. As a social problem is a particular system, it is a system of regulators. It is clear that each of the elements of the problem possesses to some degree the regulatory properties. It is clear that the power and role of each regulator is different.

Social problem of management system realizes its demands to the social organism also through such expressions of social necessity, as a social norm, principle, obligation, duty, mission commitment. The sequence of the regulatory action of social laws is the following: demands of social laws are manifested through problems demands; problem demands – through the pressure of social norms and so on.

Proceeding from just considered, we can give a more extensive definition of the nature of «social problem management system». In our view, the problem of social management is a form of existence and expression of the need for the management system to continually exercise the specific regulatory activity, without which it is impossible to ensure the creation and reproduction of organic totality of social relations at each stage of self-unfolding of the country social organism.

It is clear that a set of “its own” social problems awaits the control system at each of these stages. And it must be prepared to develop measures for their solutions. «Historically impossible – emphasized Engels – to the public of a lower level of economic development, had to deal with problems and conflicts that have

arisen and may arise only in a society that is at a higher stage of development» [540, p. 445].

However, as the theoretical analysis, it is worth more to explore other elements of the main relationship of its structure, besides the demands (content) of social problems, such as: conditions of emergence and conditions of solving.

However, we emphasize that the terms and conditions of formation of solving problems differ not only in time, but in the fact that the first ones are the possibility of others, that the first ones are necessary and insufficient while others are necessary and sufficient conditions. In addition, the conditions of problem emergence cannot be chosen while some conditions of solving can be chosen, because is why one and the same problem can be solved by different means.

To explain the genesis of social problems, it is necessary to show the origin, emergence, and in a broader sense – the origin and subsequent process of the development within the structure of the control system.

By studying the genesis of social problems of control, we must proceed from the fact that it is a social phenomenon, and it is determined by two factors: the basis and conditions. This foundation creates the content of social authority, which are relatively independent social process agent, conditions quantizes it to specific nodes. In other words, it means that the problem itself arises from the motion of the basis, and the size of the problem – due to conditions prevailing at a particular time in a particular place. There is a feedback relation. If conditions require some changes of the system of higher education, it can make them just based on the ability of reason.

Taking this into account, in the course of genetic analysis one should be very careful when distinguishing grounds and conditions, because it is a very difficult task as dialectical «transformation» of the condition into the conditioned one, cause – into the effect, general – into specific, reasons – into the result is a general law of



forming integrated systems – from the cosmological to the social ones.

Under the reason of formation of the social problems of management science should be regarded as a field of spiritual production, theoretical human activities, the function of which is to develop and systematize knowledge about reality, proving their understanding of the laws, and in practical terms – to the formulation of principles of according to the same logic deployment of the generic life of people.

Now, it is possible to complete the analysis of the basis of the social world and proceed to the summary of the conditions as a factor in the determination of social problems or changes in management. Assessing the social conditions of the control determination, we believe that the phenomenon that takes place in the social body of the country or its components – the individual and the society has yet to acquire the function, definition (property) of condition for problem management. This means that a single social phenomenon, such as building a socially oriented economy, has the ability to serve another phenomenon – the control system, perform the function of the conditions of social problems, and the second one has no such properties. In this regard, G. Hegel wrote: «When we talk about the living conditions of some things we understand it as duality: firstly, particular actual being, the existence of some immediate and, secondly, the purpose of this immediate to be withdrawn and serve for realization of the second one» [112, p. 245].

In the first approximation the conditions of the social problems of management can be described as a social phenomenon that affects its appearance, existence, development and solutions. First of all, they are interpreted in a broad and narrow sense. In a broad sense, a social phenomenon means phenomenon (process, thing, attitude, activity, etc.), which leads to problems in the control system. In the narrow – something that is necessary for the occurrence, existence or change of governance.



We know that quality effects do not arise from their relation to other phenomena. They are inherent in the very phenomenon that in this case determined with the sense genesis. However, without such relationships they cannot be detected. Every phenomenon is a complex relation of its elements, which comes primarily from the relationship management system, so that the function is to serve the problem. The term «condition issues» dictates precisely this phenomenon secondary role on the issue.

Secondly, if a process in the country social organism becomes a condition for the emergence of problems in the control system, which means that the two formed a complex connections and relationships. The condition is a form of expressing this relationship, with a negative or destructive in nature.

Thirdly, it should be noted that not all of the content of social conditions, i.e. conditions of life of the social organism countries is included in the content of the conditions of the problem. «Condition – writes G. Hegel – is a kind of cast material and requires waiting for their applications» [108, p. 150].

We believe that the conditions that determine the emergence of social problems in the control system may be at least of two types, namely primary and secondary.

The mechanism of influence of the primary conditions of the system of social relations that constitute the social body of the country, on the control system can be revealed, based on the works of K. Marx, in which the transformation dialectics of integrity into a system is grounded [273, p. 229]. Certainly, this is the way of a management system development, for within the structure of the same social organism of the country cannot be exceptions to the same by origin organisms. In this context, the control system has similar characteristics to the economic, social, political and ideological systems.

Finally, let's consider the impact of secondary conditions on the formation of social problems of management. They are related to the state of global social environment that has been serving by now as a field of potential development of social organism of any



country. Globalization observed in the global community, the establishment of a single organizational space, universalization of technology and information systems, such as the Internet, form a set of problems to manage of not only the material, technical and financial plan but of human and psychological origin.

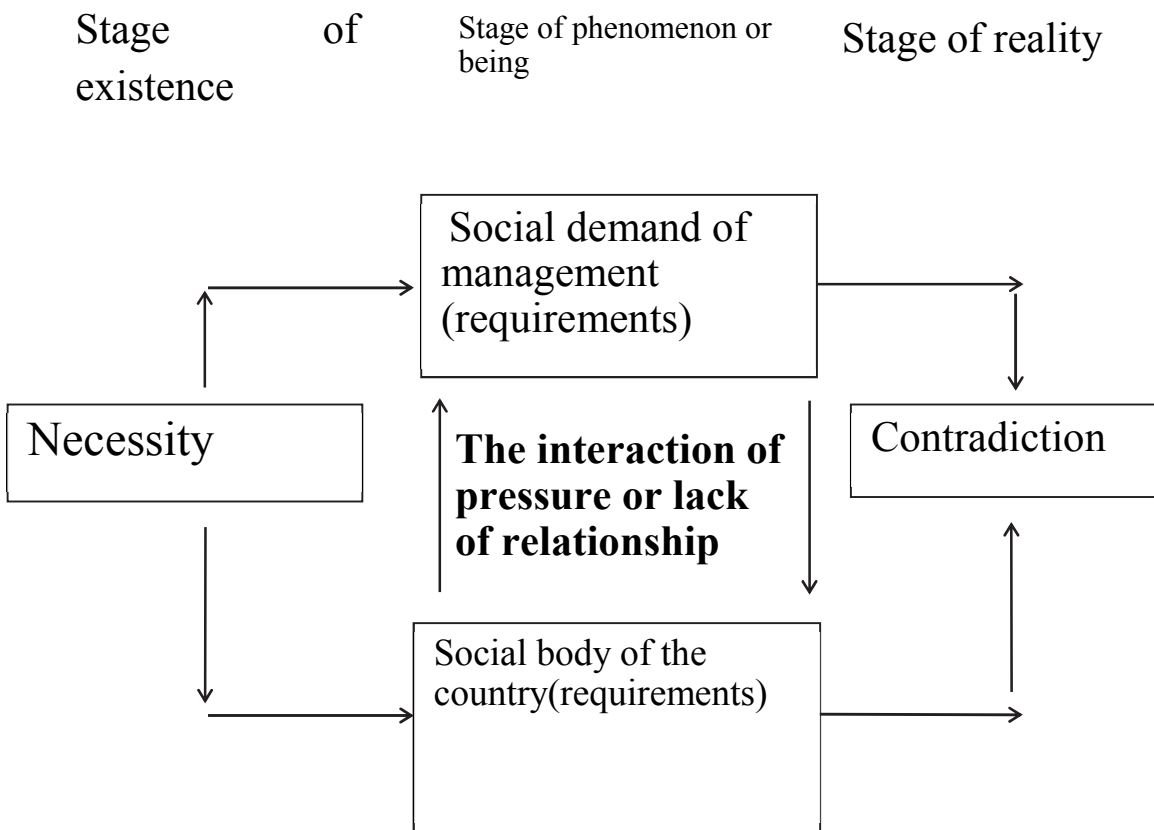
The mechanism of the formation of secondary conditions operates in the background. This means that it changes the primary conditions by giving them particular nature and speed of the processes flow that subsequently affects the control system. Therefore, in one case, they are secondary conditions; they slow the progress of the management needs satisfaction, and on this ground further problems arise; in the second – place essentially new demands on it, and it trying to fulfill them, forms within itself needs which cannot be satisfied as there are no conditions for solving them yet or they are just being formed.

Thus, it should be noted that secondary conditions could not be viewed from this angle, if not for one circumstance. It lies in the fact that the modern international community, that is Eastern and Western at the same time, are living in a transit society. This means, first, that the development of the national system of governance without considering the global trends in comprehension of the sense of sensegenesis may lead to a big risk to be back on the sidelines of a general revolutionary process, and secondly, copying foreign experience without logic deployment of national control system is unacceptable.

To form a social problem management means a forming the main structure of relations, namely: formalize the demands or needs of management, the conditions of their formation and provide the solution. The structure of the problem is part of many characteristics of the problem, which is an invariant aspect of the problem, the stable within it and therefore somewhat separated from the phenomena that determine the problem. However, a change in the problem is caused both under the influence of environment and under the influence of autonomous problem demands. The same is true for the phenomena that become the conditions of the problem solving.

Problem formation occurs, as you know, in three stages. The algorithm of selfunfolding of the concept of «problem» as the movement of a substance is analyzed in the Hegelian doctrine of the science of logic [107].

By morphological problems of management we understand the problems relating to the structure or «order» of it as a relatively independent entity. For example, morphological deformations occur in the case of insufficient funding management. This is well known. In addition, we must remember how many problems we are having with the enactment of new legislation, such as Tax, Penal Code.



Pic. 1.2.1. The structure of «social problem management system»

The functional management problems are the problems related to its functional properties. They can be observed and measured through deregulation of qualitative and quantitative indicators of the national economy, arrhythmia, dysfunction and imbalances in the social body of the country.



According to sources the origin, such conflicts arises: first, between qualitatively identical elements control system, and secondly, between the functionally differentiated its elements, and thirdly, between functionally opposing elements of the system.

Functional disorders of the management can be eliminated by active and instrumentally rational management of the country. But there are two conditions that significantly affect the quality of disorder solutions. The first one is the availability of advanced feedback control system of organizational activities. The second – a bureaucratization of management, because, as any independent entity, it can put personal interests above the public and be deaf to the demands of society.

Social problems, as, for example, morphological and functional origin, at the same time can be classified in the general evolution process as a correlation of the evolutionary process of both old and new. The contradiction of the «old-news» type is viable development of contradiction, conflict with an increase. Their decision means appearance of new possibilities, new stimuli. Therefore, it is logical that they are the basis of analysis, searching the sources of further development of the checking system.

Thus, in the management problems arise two ways. One of which is associated with our sense of genesis as a phenomenon of cosmic origin and independent of the subject of history. Science which at first we regarded as forming the basis of management problems in the near future can integrate not only in with training and education in An Education is the only process which is now in question, but also take into your whirlpool system management. This should be considered as the pattern of globalization origin.

The second way is the pressure on the system of governance by civil society, which is now rapidly being transformed into continental and global consistency. These social structures create conditions that shape problems in the structure and functioning of the management system, define its morphological and functional characteristics.



Summarizing all the mentioned above, we made the conclusion that a social problem in the structure of the checking system formed finally, when crystallized its main structural contradictions, namely: requirements, and conditions of emergence conditions of solving. Two components, already considered, now will examine the conditions of solving the social problems of management.

To investigate the specific terms of decision of social problems of management, it is necessary to mark two points: at first to the deeper line between resolutions and terms of appearance of permission of social problems of management, and secondly, to make clear an ideological and methodological and ideological background, to work out the social problems of management.

Social problem creates a new content management system that infuses positive material was created on the basis of the ideal. This negative material deformed processes, relationships, relationships in the social body, decreases in the volume and impact on the whole. The body comes alive, begins recovery phase of recovery and development.

Furthermore, we'll investigate philosophical, ideological and methodological pre-conditions to solve the management problems. The problematic of our research is actually to create conditions for formation of general theory of management. Here the most important point without which it is impossible in principle to solve any of problems of management formed at a certain stage of its maturation and development is realization of this problem by persons, parties, members of parliament, industry and state government, eventually, population of country. And this is undeniably, because it is a known fact that stimulates people to act, must necessarily get through their mind [539, p. 290].

The conditions of solving problems at the same time act as a means to solve them. It is the conditions that are often understood under the means of human activity. K. Marx analyzing the structure of the labor process wrote: «Besides the things by which labour affects the object of labour, and which therefore, somehow serve as conductors of activity in the broader sense of the labour process, to means of labor are included



all material conditions as necessary for carrying the labour-process in general» [272, p. 191]. G. Hegel recognized the «means» as determination of the object through the objective. Thus, we must recognize the dual nature of means: as means of objective realization and as means of objective determination, because the division of functions of means into ideal and real is too rigid.

The problem together with the establishment and implementation conditions determines the consequences of the impact of human activities on problem solving. The consequence appears as determined in relation to all three factors of life: a problem and two types of its condition. Types of relations of determinism between these four factors are different: relation of conditions and the conditioned (in a narrow sense); base - based, cause and effect, possibility and reality. The result, therefore, appears as determined, based reality.

Now the algorithm for solving the social problems can be recreated. It has a logical sequence of actions, which may be called the mechanism of solving social problems of management.

Criterion as a solution to social problems of management is the development of a country's social organism. In Ukraine there is artificially created gap between the government system, especially high authorities, as a body, and social body of the country as a whole, resulting in distorted form of control. While the international community monitors the quality of its development and functioning by means of direct integration of government into the social body of the country; whereby the development of management falls under the mechanism of social control. Thus, on the basis of a feedback mechanism, in a system of management is formed and operates a mechanism of social reproduction of needs of management, which is key to its self – development as self-sufficient social body and as a part of the social whole – organism of the country and adequate to it morphologically and functionally.

Concluding the analysis of the formation of social problems in terms of management science as a basis for the formation of its



problems, it should be noted: first, the scientific revolution that has embraced the world nowadays, requires special attention to the condition and prospects of the management of social development with giving it the features of sustainability, and secondly, uniting under the national system of science and education is a positive organizational step that brings it, the management system, closer to the primary source of its strength and power; finally, thirdly, because the sense genesis is in a too vigorous state, there is every reason to anticipate further growth of scope and complexity of social problems in the management structure of the social organism of any state in general and Ukraine in particular.

Certainly, we are interested in a retrospective analysis of formation of world view concepts of management in past within different ideological systems according to different algorithms of control. Two reasons make it important for us, firstly, to guarantee that technology of developing a general theory of management technical, biological and social systems began with development of philosophical principles of management theory, and secondly, to define nature and content of the next stage of its development, namely, development of own philosophical and ideological support of the research.

1.3. The phenomenon of ideological discourse management paradigms, philosophies and schools

The current objective of the study is to look at the history of philosophical and scientific thought and analyze the thinkers' viewpoint on management, since the problem of development of world view and ideological basis of management is constantly facing philosophical and scientific thought of the world. «They learn



a long time to become a master of craft, neglecting all to make the most important – manage people. There are many academic awards for solving minor issues because it would be crucial to the happiness of the human race» [115, p. 581].

In available literature, we find also explanation of the reason why until now, at the beginning of the XXI century, this discipline as a management philosophy that would explain the organizational activities of man, is not yet established. Among a number of estimates, for each researcher finds own logical explanation, we will focus on two of them. The first one is that managerial activity is of creative nature and depends on the human condition; it is incredible complexity of behaviors, extent uncertainty and non-linearity of its nature and the unfinished nature of its merits. This is indicated by E. Smirnov, who considered the philosophical foundations of controlling as a combination of all forms of analysis and evaluation of organization, development and implementation of solutions to achieve their goals, «Social system is characterized by a person in a set of interrelated elements. Social systems are significantly ahead of biological ones in diversity of operation. Set of solutions in a social system is characterized by great dynamism both in quantity and in the means and methods of implementation. This is due to the high rate of change in human consciousness, as well as nuances in their reactions to the same and the same-type situations» [417, p. 14].

The second reason is that theoretical science and philosophy were not yet engaged in this issue from the standpoint of deductive method, but rather followed the method of induction, that is by the way of accumulation and synthesis of practical material. Finding common philosophical foundations of management does not lead to positive results. In particular, «the philosophy of pragmatism and empiricism laid at the foundation of American management theories and concepts reduces the possibility of establishing a philosophical foundation for the development of the general theory. European science that has a stronger philosophical position doesn't have such rich empirical experience in management as the U.S. does» [43].



So to find ways to address the problem of grounding the world view and ideological foundations of the general theory of management, it makes sense to examine the historical experience. We rely primarily on the experience of social management, because management experience in technical and biological systems are less represented in available literature. The purpose of the analysis – critically interpret, reproduce and rebuild the fundamentals of management given to us by the ancestors. To find the answer to the question, how in organic whole «the living and the dead is combined through organization» [64, p. 70].

So, let's consider the views of the philosophers of ancient world on the problem of management. Historical and philosophical analysis provides reasons to conclude that it was philosophers who were the first management theorists. Indeed, the ability to rule a person that, according to Plato is «one of the most difficult skills to master», has always been a focus of philosophers. This view is paradoxical only with the surface approach [349, p. 57]. It would seem that management, as a kind of practical activity, should not have been in a centre of interest of Greek philosophy, with its character of ideological contemplation and contempt for the practical work. It makes sense. However, management involves not only a set of action, but the amount of knowledge. Therefore, it is not surprising that Plato insisted: very few people have the knowledge to manage and «this is the only knowledge that deserves the name of wisdom» [346, p. 219].

As you know, the need for the management and philosophy union was in detail grounded by Plato. «The State», «The Law» and a number of other dialogues permeate the idea that humanity for a long time will not be able to have «the perfect» state, «until the state is not reigned by philosophers «or until the rulers' will not nobly and thoroughly philosophize, «in other words, this will happen only when» philosophers and rulers of great states will be same people» [346, p. 275, 348, p. 527]. So those people have to govern who «by their nature tend to be philosophers and rulers of the state,

and the rest should simply follow those who rule» [346, p. 276]. In addition, it makes sense by all means to shut off ignorant citizens from power and control, while the obligation to rule has to be delegated to the wise men [347, p. 160].

So, when Julian Offray de La Mettrie, at the first half of the eighteenth century, trying to demonstrate the importance of philosophy in society provided the examples of «successful application of philosophers' efforts» in various fields – law, religion, ethics, rhetoric, and so on, he especially underlined the significance of ruling repeating, in fact, the thesis of Plato: «The philosophy to such an extent influences the art of ruling, that sovereigns who have had the school of wisdom are created to be and, indeed, are better rulers than those who are not imbued with the teachings of philosophy» [244, p. 487].

J. La Mettrie generally has very illusive hopes for the emergence of rulers-philosopher: tortoise cannot run, blind cannot see – clearly he says – so we can only hope, «that those who rule were to some degree philosophers ... this degree can never be too high» [244, p. 493].

Jean de Labruier sounds rightly noting that stating of episodic manifestation of «wise government» itself, of course, inspires us, «in truth, lately kings and ministers have been neglect this art too much» [241, p. 222].

Paul Anri Holbach as referring to Plato's formulation, to some extent, strengthens its main thesis with new arguments. First, that philosophers are more experienced in the causal laws of social life than all other members of society; the charges are against them that philosophy teaches citizens indifference to public affairs is absolutely groundless, however, «with the educated government, in free people, in the country with reasonable laws, the philosopher will always be an active citizen. «Second, in general» in a well-governed country, educated person has a significant impact and can influence other people» [129, p. 391].

According to Bernard Mandeville, the very possibility to transform «an inappropriate for society» person into «obedient

creature that can find its purpose working for others» that is, the possibility of forming community of people where «every member of society obeys the whole, «emerges» through intricate ruling» [269, p. 310].

As a warning, sounds Lezhe-Marie Deshan's opinion expressed back in the XVIII century that «basic principles of ruling bring out outrage as soon as they are made public» [147, p. 167]. So he tried to explain the sudden outrage caused by publication of book by Niccolo Machiavelli's «The Emperor» that opens the entire mechanism of retaining power. «Rule springs, concludes Deshan, must remain hidden; they would cease to operate if they were known to people» [147, p. 167].

Theological interpretation of governing, especial practice is also interesting for us; it is presenting specific mono ideology, rigid practices of governance and specific ideological coloring, if you draw the line between different religious currents, as did, for example, Max Weber in a famous book «Protestant ethics and the spirit of capitalism» or Buddhist, Christian, and Islamic world view paradigm [86].

Religious constants of social and cultural progress are a factor characteristic of all key forms of world civilization. The famous American philosopher and cultural scholar Clifford Geertz in his work «The interpretation of cultures» notes, «the importance of religion consists in its ability to serve ... source ... general ideas about the world, personality and relationships between them ... with these cultural features resulting ... social and psychological functions of religion. Religious concepts beyond their ... metaphysical context provide a backbone of general ideas by which you can provide an acceptable form of expression for various experiences – intellectual, moral... » [126, p. 147]. And to these words of K. Geertz we add organizational experience.

The topicality of theocratic management philosophy review, which serves as a basis of centralized system of management within the Latin Church, comes from the empirical fact that this church has



been able to survive under conditions of multiple shocks for almost two millennia. Moreover, as history of XXth century shows, it became an ideological skeleton of eclectic system of management of Nazi Germany, and its individual elements appear under current conditions [351, p. 81–100].

And today, in the new millennium Latin Church has to adept oneself to the new socio-cultural conditions of the world, that is changing dynamically [530, p. 567]. Religious power is enduring and now it resists the secular power. Their resistance is observed most vividly, as it has acute course in countries with Muslim faith, for example in Iran, Afghanistan, in some other Islamic countries, where the Sharia rises to surface of social development management. We have considered more details on these issues in the monograph «Philosophy of social systems management» [54].

Chinese interpretation of management philosophy is probably the most ancient, the most enduring and the one which has perspective in future, as it is based on the idea of unity of the Universe, society and people. Confucian management philosophy is the ethic doctrine with definite hierarchical structure of moral values, which deeply interiorize (penetrate into the interior part of human's integrity) within the process of socialization. It comes from the fact, that «an individual is kind due to his nature and initially has the desire of improvement, which means to discover and develop kind («human»), true human principles and oppress evil («animal») principles or, as V. Alekseyev suggests, «to fight against meanness element inside oneself» [1, c. 27].

Using contemporary scientific language this idea can be formulated in the following way: the core of Confucian doctrine is powerful negentropic pathos, according to which, it is the inner moral obligation, which underlies boundless self-improvement [434, p. 141].

Confucianism holds sharp contrast between such a «negentropic» person (Chun-Tzu – «noble man») and «entropy person», amoral (Xiao Zhenu – «vile») person. While Chun-Tzu is



constantly progressing in his moral and psychic development, increasing strictness to oneself, Xiao Zhenu, on the contrary, is constantly degrading, every time becoming more and more dependent on destructive force of his passion: «Noble person moves up, unworthy person moves down» [1, p. 26–27]. The signifying part of Confucian ideal man is the inner, purely moral nature of Chun-Tzu behavior regulators.

On the whole, the idea of Confucian management philosophy is as follows: The Universe is ruled by the Sky, wherefrom the laws of harmony, honor, obligation and expediency come to the underlying land. Confucius reflections about management and managerial skills emerge from the imperative of hierarchical inviolability between tops and bottoms, strict adherence to the rules of the ritual («Chi»), which requires unquestioning obedience of the bottoms to the tops: «Emperor must to be emperor, grandee must be grandee, father – father, son – to be a son» [508].

The tops themselves show love to each other and solidarity, that forms the ritual «jen» (humanity). «In case the ritual is observed at the top level, it is easy to manage the people» [258]. This very commitment to preserve harmony became the center of Confucian traditions: «When everyone finds appropriate thing to do, occupies the appropriate place, then the higher and the lower serve to each other» [508].

The followers of Confucius' doctrine – Meen-tzu Confucius and his followers developed detailed principles of «People-loving» management. Here to the main idea of Confucius about the right of the tops to dominate and manage and about the bottoms' obligation to obey the requirement to the rulers to be fair is added. But «functional» correlation doesn't change: as it is «the general law in Heavens». The most special interpretation of this law is as follows: «Some people strain their mind, others strain their muscles. Those who strain their muscles manage people. Those who strain the muscles are managed. The managed keep those ones who manage. And those, who manage people, are kept by those who they manage» [311].



Those, who opposed Confucians from the point of view of «the lower», Mo-chi and his followers, developed detailed principles of «wise management», which main idea is still the same, but rectified from aristocratic fluffs of Confucian thesis «right person at the right place»: «One who is able to rule the country is appointed to rule the country; one who is able to be a chief of a department is appointed to be the chief of the department; one who is able to rule the settlement is appointed to rule the settlement» [308].

As we can see, while according to Confucius, only people from high estate are able to rule and plebs' behavior is regulated exclusively by the code of obedience, the decisive criterion for Mo-chi is not the factor of birth, but personal qualities (worth an dignity) of an applicant for managerial position. Violating this fundamental principle is the main reason of system confusion: «...A person, who is not able to manage even a hundred of people, is appointed the chief of department to manage a thousand of people... This position is ten times greater than his abilities... And even if this clerk was continuously involved in the affairs of the department day and night, the things will still remain undone, as if none has ever done them before» [308].

A bit later than Confucianism (in IV century BC, attributable to the era of «Warring States») the doctrine of Legist-lawyers emerged (in Chinese fa-chia), which ideas subsequently became a part of Chinese ideology. In line with these considerations, in particular among the representatives of the school of «lawyers» more specific formulations of «proper», «good» management were developed. For example: «If to make the rules of appointment permanent, qualitative governance will prevail» [521].

The prominent theoretician of Legalism was Shang Yang, official Wang of Xiao Qin kingdom Gouna. Let us note that Legalism is the form of ruling of the society, which is based on the centralization of power. To strengthen the Qin kingdom and to return the lost hegemony over its neighbors Shang Yang offered not to pay much attention to the former traditions, which praise moral



values of ancient governors but to reform principles of social structure. Together with other theoreticians of Legalism (Shen Dao, Shen Buch, Han Fei) they created a coherent concept of despotic state, which «functions under conditions of unrestricted power of a governor with individually controlled unified administrative apparatus; offered the idea of state economic regulation mainly with the help of measures of promoting agriculture and ordering of fiscal system; system of centralized governance of state according to the principle of regular administrative division; appointment of officials by the governor instead of traditional positions succession; principle of assigning ranks of nobility, privileges for specific purposes, especially in military campaigns; control over the thoughts 'content of subordinates, censorship supervision of officials; system of collective and group responsibility» [209, p. 161].

Legalism played its role during the era of «Warring States», when it came to the unification of China in the empire, which was accompanied by destruction of material and moral values together with corresponding social structures. This philosophy of the society management considered a person as a creature initially immoral. That is why it is worth to manage his behavior not with the help of inner, moral, but external, compulsive, fundamentally immoral sanctions. «While Confucianism organized human activity through ethical norms, legalism is something like disciplinary statute or criminal code – «carrot and stick approach» with vivid domination of «the stick». Let's say, Confucianism was designed for «negentropic» cultural personality, and legalism – for immoral «entropy». In terms of universal anomie it appeared to be effective for some period of time, having disciplined and curbed with the help of law («fa») those people, who ungirted in times of wars and anarchy of hsiao-jen [434, p. 141].

Synthesis of Confucianism and legalism appeared to be not so complicated, because they had a lot in common. As a result of reforms of Han Emperor In di modification of the original Confucianism took place; it became the state ideology, which



increased the role of bureaucratic institutions considerably [209, p. 162–163].

Philosophical Tao doctrine is an ideological basis of synergistic approach to management of complex, multidimensional, nonlinear system of modern society. One of Taoism's tenets shows: «a thing gets a life, implanting into the hollow flaw of transformation» [267, p. 44]. In other words, existence and nature of things are rooted in interdependence and they themselves are naught, namely the world which surrounds us is a dynamic process of interactions and changes. That is why it is not an accident, that in «the Book of Change» it is emphasized: «Natural laws are not exterior regarding to the things; they embody harmony of movement immanent to the things themselves» [200, p. 198]. Philosophy of Tao is based on fundamental principle according to which the synergetics does not come from power performance, but from correct topological configuration, architecture, resonance effects on the complex, nonlinear environment, which organizes itself, i.e. this philosophy is the expression of spontaneity of existence [87; 136, p. 240–241].

Organistic conception identifies Chinese philosophy in the sphere of the society management. Chinese people tend to be in favor of traditional statehood and real veneration of it, as this power had both religious and moral sense, moreover Chinese empire until the early XX «retained the features of archaic believes» [267, p. 105]. The core of management of Chinese society is based on principles of organistic philosophy, what explains the extraordinary stability of Chinese civilization.

The first principle means that the state was understood as a reigning house, dynastic tree as some «single body» that covered all members of the family both living and dead. The second principle is the interpretation of the ruler as a center of cosmic forces, focus of global circulation; he is responsible for the improvement of the Universe which gives it moral authority.

The characteristic of organistic philosophy, which forms the basis of Chinese society management and which explains its extraordinary

vitality, is summarized by V. Malyavin in the following way: «The state and all the world were considered as a living body and one of main qualities of wise ruling has been penetrability, «permeability» (tun) of all canals of world's «living energy» circulation canals – both in nature and society. Position of the individual equated to his innate destiny. People are equal in fate's inheritance, ideologists of the empire suggested; all people are equal, despite the disparity of their state. The ideal society had to function quite naturally; life should have been modeled according to anthill or bee hive pattern. The ruler's wisdom was to «fully use» natural talents of everyone. And as any action has symbolic sense and those who understand it will have the power, the division into controlling and controlled will exist forever in the world» [267, p. 108].

Japanese interpretation management philosophy differs from others, particularly from Chinese philosophy, as it mostly designed for corporate level and relies on deep feelings and motivation of a person.

Zen philosophy concerns continuing education, necessary for successful management of individual's or group's behavior. Every person through continuing education is able to improve the quality of his work. This leads to self-development, and achieved results provide moral satisfaction. Zen approach gives special meaning to obligation in improving skills without expecting any notable material gain. Proficiency improvement may provide great satisfaction for the person. Everyone has an innate desire to achieve excellence in his work. Zen approach satisfies this desire and even enhances it. This affects positively both a person and the firm where he works [338, p. 35–36].

The effectiveness of Zen philosophy in people's behavior management comes from the fact, that Japanese companies are not only economical institutions, but mainly social organizations. «Main factors that determine prestige of a company in Japan are its legal status, controlled market share, membership on the exchange and corporate philosophy. These indicators are more substantive, than the price of shares or level of profitability. Company's prestige



determines its access to external financial sources, possibility in order to involve human resources with high potential» [175, p. 91].

The prestige of the firm, where a Jap works, determines mainly his recognition and status in the society. «Corporative philosophy is reflected in the hierarchical structure of the firm, in the organizing system of work, production and management. Despite traditional principles, oriented to providing profitability of economic unit (formalization, specialization, and labor division), while developing systems of labor in Japan they orient to informality, flexibility and cooperation» [175, p. 91].

Zen philosophy represents crystallization of the whole philosophy of the East, for which there is nothing clear and explicit. Eastern philosophy demonstrates, that eastern mind due to its nature is synthetic, but not analytical, that aims to «intuitive achievement of the unity» [442, p. 23]. It is worth remembering, that zen is a weapon of samurai spirit, which was incorporated to Japanese culture and has provided considerable influence on the activity of big corporations and small firms. In Zen philosophy negative nature of informality, connected with the understanding of the form is qualified in the following way: «any commitment, any fixed consciousness constrains the warrior as if by chains and deprives him of fluctuation, as if nails him to a definite specific form. A susceptibility to form is death; disinclination and fluctuation, shapelessness is the property of life, this is the very property of life which provides victory in deadly duel for the warrior» [338; 406, p. 294]. So, Zen philosophy inherently is a deep theory of Jap's behavior management and the whole Japanese society.

In conclusion, let us note: it's quite natural, that now the so called «humanitarian type of economic growth» starts to appear. «This type of economic growth has actually existed, though its typical approach to management can be found in most advanced organizations. It is considered that this type of economic growth is typical for Japanese enterprises» [175, p. 43]



American management has gained considerable experience of empirical material for analyses of philosophical approaches to this phenomenon. American ideological practice recognizes management as ethno-cultural phenomenon and respectively, deals with national model search. There is no surprise, that this last circumstance is not revealed in works of American authors.

Majority of them visibly or implicitly keep to the traditional position, formulated by Henry Ford: «To insist on Americanism does not mean to insist on the narrow nationalism. The main principles of Americanism form the goal, which is being endeavored by civilizations» [493, p. 264].

In contrast to the previous statement, we'll give a very interesting observation of G. Gofstede: «It's usually difficult for American managers to cooperate fully in the framework of industrial democracy programs in such countries as Sweden, Germany and even the Netherlands. The citizens of the United States tend to consider their country to be an example of democracy and can't easily reconcile with the fact, that in other countries can be developed such forms of democracy which don't correspond to their understanding and which are direct encroachment on the privileges of the American Management» [559, p. 381].

It is because of such a methodological ethnocentrism (inevitable consequence of ideological snobbery) American authors haven't for a long time recognized the essential uniqueness of Japanese management: the formula «Japanese spirit + Western technology has been more appropriate explanation for them» [263, p. 39]. That is why they invited, as it is known to their own production tens of thousands of Japanese managers. First of all, the domination of the philosophy of pragmatism that pervades American society is noteworthy.

As a result, Russian social science copies American version of managerial thought development and presents it as final variant of cultural and historical development of the phenomenon. For example, Russian scientists A. Kravchenko and I. Tiurina in a



tutorial for high school «Sociology of Management» distinguish 16 trends which are materialized in corresponding conceptions and approaches to study of management. Among them: theory of rationalization of F. Taylor, administrative theory of H. Fayol, «classical» theory of organizations, conception of management of M. Follet, theory of «human relations» of E. Mayo, hierarchical theory of needs of A. Maslow, two-factor F. Herzberg theory of motivation, D. McGregor's theory of leadership styles, leadership behavior school of Tanenbaum R. and W. Schmidt, theory of leadership styles of R. Likert, B. Bass' theory of efficient organization, empirical L. Newman School, integrated approach to the management of H. Leavitt, social systems school of G. Simon, systematic approach to the management of A. Etzioni [225, p. 8–68].

The fundamental requirement of high quality management means knowledge of human's nature – consideration of this ability gives possibility, it is emphasized in the newest American encyclopedia of management, to use «human sources» in the most productive way [421]. New philosophy, which is going to substitute Taylorism-Fordism and comes from appealing to highest value in production of «human factor» will allow to overcome exclusion, encourage initiative and unleash the creative potential of the human [444, p. 181].

Methodological approach assumes reflection of formed activity, regarding its improvement or reorganization. The recognized theoretician of management P. Drucker in his well-known work «Management Challenges for the 21st Century» implements a variant of this reflection – «methodical approach», which is an analyses and generalization of specific management experience [158, pp. 22–23]

Methodologically profound proposition to researchers was made by Russian author M. Motishina, who in her tutorial «Management systems investigation» (2006) formalized priority areas for management systems research and gave a sufficiently large arsenal of methods and procedures for analytical work [307].



European philosophy is full of contradicting approaches to management. Its palette is decorated with extremes of eclectic philosophy, which is typical for the rule of Hitler and philosophy of postmodernism, which captures the contemporary intellectual thought.

Eclectic philosophy of management is a racial world view of the Nazi, where the main component has been radical anti-Semitism. It is evidenced by talks of Hitler with his entourage G. Rauschning about significance of philosophical principles of management, which are used in Catholic Church management by masons and others: «First, I learned from the Jesuits. However, as I recall Lenin dealt with the same. The world has not created anything more beautiful, than the hierarchical structure of the Catholic Church. A lot of things I just transferred from it to the structure of my party. Because the church has survived for almost two thousand years under conditions of general changes – and it really means something. The Catholic Church may serve as an example, first of all thanks to unusually wise tactics and its knowledge of human nature, thanks to wise use of human weaknesses for the management of the faithful. And I, developing our program – eternally valid basic principle of our party – strictly followed the sample of church creed [383, p. 184]. From masons Hitler borrowed the award hierarchy of secular priesthood, which in combination with philosophical principles of Catholic Church gives it advantages over rivals [424]. To clarify other characteristics of eclectic conception of Nazi management it is worthily to consult the source of V. Policarpov that we have cited.

The fundamental thesis of philosophical management's foundations is the issue, that human nature (as well as surrounding world's nature) is a unity and interaction of order and chaos, that its core has socio-cultural nature and is in constant change. We observe three processes: a) generation of philosophy of postmodernity itself; b) generation of original conceptions of management; c) synthesis of philosophy and management accompanied by introduction of a



new product – postmodern conceptions of management philosophy. That is why here the character of two first elements will probably be discussed, than canonic philosophy of management in postmodern interpretation. Inconsistency is simply unpredictable due to postmodernism nature, in the structure of which four following themes are usually distinguished: a) agnostic, b) pragmatic, c) eclectic, and d) anarchic-democratic [67; 187].

It seems, that classical Holistic attitude weakened significantly in the second part of XX century and at the beginning of XXI century has conceded to postmodern interpretation of management. The first signs of a new paradigm of management can be discovered in general «humanistic turn» in the middle of the 70th in XX century. This is the beginning of «existential psychology», conceptions of «quality of labor life», «human capital», «individual-oriented management», «management, that creates motivation», as well as practical activities in «labour humanization», «industrial democracy» etc, but especially – the beginning of understanding of management as ethno-cultural phenomenon and, respectively, searches of its national model.

With the appearance of new paradigm of management many scientists ascertain the gap between the concepts of management and managerial work [461], progressing «discrepancy between science and practice of management control» up to the conclusion of the «deep crisis in management science» [477]. Practical workers also exhibit dissatisfaction, stating the fact, that theoreticians offer them primitive schemes, «folklore-like conclusions, some «half the truths», proposals like «pour old wine in new barrel» which is generally intended for «gullible managers» for «management in pink glasses» [550; 560; 564].

And the concept of «philosophy of management» itself, figuring on the website of internet a lot, becomes extremely simplified [549; 552]. But the theoreticians of management themselves note «depressing prospect» in their own environment, which appears as a result of continuous «destructive war paradigm» [568]. So it is

natural to appeal to theorists Edward de Bono and Robert Heller: «Don't be foolish: simplify your management philosophy» [562]. This is actually what is happening now, considering the content of websites – simplification bordering the profanation of the role of philosophy both for theory and practice of management. This phenomenon is explained by V. Mirzoian [297; 298].

It's noteworthy, that both for theoreticians and practical workers of management, despite mutual dissatisfaction, are sure in the rapid formation of a new management paradigm, «new managerial thinking», and «meta-theory of management». But meaningful analysis of new synthesis attempts which are held reveals an underestimation of the overall methodological role of philosophy. We'll verify this referring to the example of work of Oxford University specialists «The greatest ideas in management: development theory process». Its authors, Ken Smith and Michael Heat, suggests, that as management is a young science and many ideas and conceptions were borrowed from psychology and sociology «new theory appearance provides a unique opportunity to clarify the holistic understanding of the phenomenon of management» [558]. General tendency on the West appears as attraction to the organistic concept of the East.

But there is an essential difference between them. Eastern despotism corresponds to economic necessity, irrigation and mustering of productive capacity. Western despotism, first of all, corresponds to political necessity. It prefers to monopolize instruments of influence or infusion, which are schools, the press, radio etc. The first one is able to dominate the masses thanks to controlling of their needs (in water or food, as examples). The second one achieves its goal by control over the belief of most people in individual, ideal, even party [305, p. 75].

View on the philosophy of management in Ukraine and CIS. Overall unsatisfactory rating of the state of theoretical management principles development due to insufficient philosophical and methodological support in the sphere of management is recognized



by all scientists and because of this it doesn't correspond to modern stage of society's development. As an example, in introduction to three-volume monograph «Modern Applied Control Theory» the following statements are ascertained: «Considering all realms starting from the Universe and ending from molecular micro and from technical system to man-machine system of management, it is necessary to accept, that highly effective exact science of management nowadays is the most relevant and most important among all sciences... The science of management has not been developed properly; it falls behind the needs of practice» [420, p. 3].

B. Diev under «management philosophy» understands the system of generalized judgments of philosophical nature about the subject and methods of management, the place of management among other sciences and in the system of scientific knowledge in general, its cognitive and social role in modern society. Philosophy of management considers axiological, gnosiological and methodological background of human activity in the processes of management [See: 151].

V. Polikarpov frames the philosophy of management: «This multi-layered, multi-hierarchical structure of management has heterogenic (miscellaneous) nature, on all of its levels the system of network connections can be used, herewith depending on the specific conditions it is worth to use linear (mechanistic), non-linear (organistic), noospheric, including reflection, semiospheric and temporal approaches as a basis of society system management and people's behavior» [351, p. 14].

V. Stiopin believes that understanding of the phenomenon of management is impossible without philosophy. He suggests: «...together with genetic code, which consolidates and transfers biological programs from generation to generation, an individual has one more coding system – socio-code, super-biological programs, which regulate social life, and they are transferred from person to person, from generation to generation» [437, p. 6].

The approach of G. Kvasov is worth considering as it comes from the conception of human being as a philosophical basis of



management theory. «The typology of human life is, – G. Kvasov suggests, – that there are high culture people, who combine freedom, culture and creativity, which form the basis of human being. Freedom is a real culture, and there are as many cultures as many types of human communication. This is exactly the way of thinking where a lot of the values can be found by those, who deal with theory and practice of management» [392].

V. Mirzoyan has original views on management philosophy. Let's pay attention to his conclusion about the idea that «philosophy of management can't be included to the course of theoretical management; as it's similarly impossible to require from the latter availability of generalizations of philosophical nature. Although it is clear, that theoretical pursuits in this area will benefit, if in the formulating of the problem, as well as in search of solutions, theoreticians will be guided by methodological position, based on clear philosophical principles. It is important to understand the qualitative difference between these two spheres of knowledge: manager-theoretician deals with the profound analysis of the fundamental concepts of management and generalization of management practice, meanwhile the philosopher of management – with the profound analyses of fundamental ideas and concepts of theory of management itself» [297].

Worldwide state or globalized informational society fundamentally change the state of person's outlook, the content of managerial activity in the sphere of organization of life of the international community, spontaneous formation of fundamentally new, virtual by origin and functional nature managerial structures is taking place. Today a stage of its incipience is taking place and new fundamental directions in managerial theory and techniques have started to appear: physical theory of management, synergetic approach to theory of management, optimization of systems with predictable model, theory of fuzzy and neural network control systems, etc. These new ones are the very directions in theory and techniques, from which important practical applications are expected.



In informational society or the society of knowledge, knowledge is becoming more and more meaningful as a new paradigm of management, which is based on indissoluble link between fundamental processes, – work, education and organization. And as meta-processes in the model of knowledge management appears to be communication and reflection, the sub-processes of the model themselves are realized three levels – individual, group and institutional [See: 525].

The social world of the individual is materialized through his activities as objectively determined «particle» of the nature's world and management of society and human behavior. This management is based on the philosophy of interactions and interpenetration of chaos and order and for this reason has its possibilities and bounds. Modern scientific and philosophical investigations provide the grounds for formulation (according to V. Polikarpov) of conception of integral management of the society and individual [351, p. 198].

The necessity of philosophers' presence in the sphere of management theory development is felt for the reason that managers have started to play with conceptions, which are based on the use of linear and non-linear time [See: 264-265]. This brings to mind a model of culture as a game introduced by S. Lem [247, p. 51–52]. This is especially evident in the international arena, where the interaction of non-governmental organizations, TNC, peoples, who don't have their own state (the so-called «Fourth World») take place [See: 217; 300].

Meaningfulness of time as a fundamental parameter of nature and society in management comes from the empirical fact, according to which physical, biological, social and cultural systemic and non-systemic formations have their genesis, develop, wear out and die. The time is an attribute of endless world, which characterizes duration and change of states of final «things» (it is, according to G. Hegel expression «pure unity of being and nothingness»), that is why it must come to the managing fabric and to controlled part of this or that existing education. It is the kind of

time conception which is used in the theory of management on which the philosophy of management depends and its methodological effectiveness, emerging from it.

The dynamics of modern societies is characterized by the growth of their complexity, which demands for their management to use non-linear methods of research of the variety of socio-cultural processes [See: 6; 9]. The problems of complex safety of noospheric objects and subjects requires for their solving to use methods of catastrophes: the first one – is a physical way, based on our relatively full knowledge of system laws, the second – is a metaphysical (speculative) one and is usually restricted by social-biological sciences, which manage [See: 551]. So, the philosophy of management must necessarily include main principles of safety philosophy, shapes of which are starting to appear.

So, let us make some conclusions, which come from the stated above material. In concentrated form they are as follows:

– first, referring to the history of philosophical thought proved, that a) deep concept of a problem is constant, only some forms of this or that managerial problem's solution change historically; b) it has been philosophical thought, that preserved and distinguished fundamental ideas and theoretical generalizations of managerial experience of the previous generations before the formation of science of management; c) majority of philosophers don't only fix the state of the society as an active form of society and other social constrictions' management, but also search for their «better» forms – search is typical for philosophy as an active form of social consciousness, way of thinking, oriented to ideals; d) knowledge and methodological application by private-scientific investigations and managerial practice of philosophical formulations is useful now as well, at least for the chance not to «re-invent the wheel»;

– second, informatization and globalization of social world lead to radical restructuring of organizational basis of planetary community, which is accompanied by spontaneous origination of



disembodied (virtual) structures, for example, virtual firm, state, government. Thus, all messages of all kinds are closely related to the means of communication, which have become so comprehensive and diverse, that they absorb the same multimedia texts into the value of human experience. This way of communication is analogical to the unique point of the Universe, called «Aleph» by J. Borges.

— third, contemporary situation in the sphere of management is accompanied by the explosion of conceptions of management, which are consciously or subconsciously directed to recognition of organism-like order of social world, to wit oriented to Chinese understanding of place and role of individual in the Universe, which opens perspective of generalization of ideological principles of general theory of management, as technical, biological and social systems are origins of the single subject – man;

— fourth, new conditions of international community being demand qualitatively new consciousness, updating of outlook and, according to this, a qualitatively new culture of behavior in more fragile and sensitive society; in other words, socialization of an individual depends on management system of the society, which orients to these or those values and ideals, cohere with the range of senses, that indicate the uniqueness of a culture.

— fifth, thanks to the specifics of the philosophy, which unites all taught sciences in one unity, in this case, general theory of management like in all the group of managerial disciplines have real chance of system unification. As philosophical discipline oriented to creation of an overall view of the world and the place of individual in it, philosophy of management creates the possibility of generalization and understanding of the realities of management, having also become an ideological basis for deployment of further fruitful research.



1.4. Approaches, principles, methods and categories of research.

The task of this subsection is to develop cognitive principles, which have to create philosophical basis for the process of formation of general theory of technical, biological and social systems management. That is why we need to study the material at higher level of methodological knowledge, as the investigation takes place in the realm of social philosophy. It includes both, conceptual principles (ideological foundations of scientific thinking, philosophical «world view») and formal, i.e. those, belonging to general forms of scientific thinking, to its historically certain categorical system.

Products of our scientific research must support the second and the third levels of methodological knowledge. The second level of the methodology is the level of general scientific principles and forms of research. It comprises of both substantial general scientific concepts, which fulfill methodological functions and formal workings and theories, connected with the solution of wide range of methodological problems. The third level of methodology comprises methods and techniques of the research, i.e. set of procedures which provide acquiring of equal and true empirical material and its preprocessing, only after which it can be included in array of cash knowledge [542, pp. 41–46].

Shaping the instrumental and methodological complex for the research goal's achievement, for conceptualization we must bear in mind that the problematic field, that should be covered, is a super-system, subordinated to laws of self-regulation and managing of technical, biological and social systems play the role of elements. Together they create unity, which arises and is held by organizational interaction. Let us note that providing conditions for the effective organizational interactions of the three subsystems created by man is the main goal of our investigation. M. Tulenkov,



who specially analyzed it, defined it, the organizational interaction, in broad and narrow sense [466, pp. 62–63]. It is a subspecies of social interaction.

Therefore, we believe that methodological complex of our investigation means should serve theoretical philosophy, i.e. formation of management philosophy, to the purpose of which we refer clarification of: a) genesis of this phenomenon – determinants of philosophical origin which cause the formation of general management theory; b) philosophical principles nature; c) outlook, which uncovers the subject of study in the most embossed way; d) ideology which will create a system of effective semantic filters for analyses of substantive field of the research; e) methodological means of analyses of substantive field of the investigation, i.e. philosophical categories which explain the formation of general theory of management.

The main means of cognitive analyses of investigation of philosophical principles of general management theory formation is a creative one, today it is a non-linear philosophical thinking, as it relies on elementary, scientific and philosophical reflection. In other words, main analytical means for philosophy is reflection. It differs from usual reflection by the fact, that its subjects consider themselves and their spiritual and practical relationship with reality in context of general categories of world understanding as being and nothingness, time and eternity, spirit and matter, life and death, good and evil etc.

As to philosophical reflection in the sphere of management, it involves the ability of subjects – bearers of organizational consciousness – proceed in their thinking beyond purely administrative reality and into the realm of philosophical universals, their readiness to overcome their direct states and impressions for the immersion in the intricacies of complex, mediated by many links dependences. The more the organizational consciousness is developed, the more effective is its reflection activity, the more often finds it different links that mediate.

An elementary reflection turns the subject to self-analyses of his actions and knowledge. Scientific reflection is directed to the analyses of techniques and methods of cognition, which are used in this or that sphere of the research. It helps to define a critical principle, which aims to form the theory [487, p. 809].

But philosophical reflection apart from critical principle, which allows to describe, explain and to forecast effects of laws forms a heuristic principle of cognition, i.e. plays the role of the knowledge source. And this is possible only because it is «philosophical which is concentrated on awareness and understanding of limiting the grounds of being, thinking and human culture in general» [487, p. 717]. It rightly claims to be a generic, conceptual and semantic analysis of theoretical-methodological problems of management, to clarify methodological principles of management conceptions and evolution of main paradigms, as well as to work out behavioral and ethical code of effective organization's functioning.

So, the subject matter of our study has been divided into three segments: management of technical, biological and social systems and because of this while researching it we must use only systematic approach using such methodological tools of integration into unity as *dispositif* (M. Foucault).

What lies behind M.Foucault term *dispositif* and how can it help us in our investigation? «What I'm trying to grab under this name (*dispositif* – auth.), – M. Foucault writes, – is first a certain complex – radically heterogenic, which includes discourses, institutions, laws, administrative activities, scientific expressions, philosophical and also moral and philanthropic thesis, – so, both spoken and unspoken – these are elements of *dispositif*. Actually, *dispositif* is a network, which can be established between these elements.

Second, what I wanted to highlight in the notion of *dispositif* is just the nature of the relationship between these heterogeneous elements. Thus, a discourse may appear either in the form of program of an institution (i.e. public discourse – auth.), or vice versa as an element which allows to justify and hide the practice which



itself remains silent... or after all, it can function as a rethinking of the practice, provide access to new field of rationality... Under the dispositif, thirdly, I understand – say – certain kind of education, the most important function of which at this historical moment has been: to respond to certain urgency. Dispositif therefore has mainly strategic function» [389, p. 368].

V. Rozin, who used for example dispositive for the formation of philosophy of management wrote the following: «Under dispositive of a phenomenon we (V. Rosin and L. Golubkova) will understand a scheme (description) of this phenomenon as an ideal object, containing certain aspects (plans, components) of the object, at the same time such a scheme in this or that way takes into account the analyzes of discourses, deployed on this phenomenon, allows to explain problems having reference to this phenomenon, provides possibility to act against it. Dispositif sets, though, complete but heterogeneous representation of the object. In modal terms, this object can be studied as «possible object», the one who thinks, analyzing discourses, problematizes situation as an unsatisfactory one and intends to influence the phenomenon, that he is interested in. The structure of possible object is clarified, refined and specified (and revised if necessary) in the process of further investigations and creation of the discipline, which describes and explains this object. In the process of this discipline's construction the dispositif is used as a methodological map and as configurator of possible object (that is why such a discipline can be called «purview») » [389, p. 184–185].

To formulate personal attitude to the views of key communicators – technical, biological and social systems, it is necessary to analyze corresponding discourses and conceptions of management. So for us, the discourse of a phenomenon – it is a way of its study and linguistic expression, that positions itself in the field of communication (with whom a thinker argues or agrees) and in this or that form, which includes defining of the nature of effect on this phenomenon. Despite the discourse, conception assumes certain (philosophical or theoretical) explanation of a phenomenon.



Methodological means in this case are discourses, where the management of technical, biological and social systems is reproduced. Let's pay attention to the deepness of problem field analyses. In the majority of cases the researches should have used a discourse as an integrator to build phenomena to a common denominator, but in our case it is necessary to introduce dispositif, in the fairway of which we examine three discourses of management.

It is necessary to add the fourth discourse to these three ones – the discourse of power, without principles of which it is impossible to master the phenomenon of management in three spheres of human's activity. Management is the realization of power which has many faces. «Under the power, – M. Foukalut wrote, in my opinion we should first of all understand multiplicity of force relations which are immanent to the sphere, where they are carried out, and which are constitutive for their organization; understand the game, which by continuous battles and clashes transforms them, enhances and inverts; to understand the support which these force relations find in one another in such a way, that chain or system is formed, or, on the contrary, to understand displacement and controversy, which distinguish them from each other; eventually, it is necessary to understand strategies under the power – under them these relations of power reach their effectiveness, strategies, the general shapes or institutional crystallization of which are embodied within the state apparatus, in the formulation of the law, in the forms of social domination» [498, p. 192].

So, based on this research subject field, we should talk about the three discourses, namely: a) discourse of technical systems management; b) discourse of biological systems management; c) discourse of social systems management.

Of course, in the literature these elements are reflected in varying degrees of intensity and size or represented material. For example, it is much less than on the first and second directions, however it is well represented by the third one. The latter includes



the classic discourse of management (from Taylor to Drucker). This discourse can be referred to doing «private methodology», the aim of which is double: on the one hand, is reflection and understanding of difficulties and contradictions in particular disciplines (meaning in management), on the other hand, – discussing the ways of overcoming of these contradictions, difficulties and problems. Productive biological analogies and biological reductionism can also be added, as well as theoretical discourse in management (R. Ackoff). Bring the contents of all three discourses in consistent picture with the help of dispositif is our research objective. The product must be conceptualization of philosophical principles, which will become a cognitive base for the formation of general theory of management.

An effective methodological approach within the investigation may be system approach, and the principle of activity must be the leading one, as it definitely serves as a system-factor. Indeed, organizational human activities are inherent to all three types of management mentioned above and that is why it serves as a unifying framework for the stated discourses of management.

M. Tulienkov suggests that an approach to study of organization interaction in social management will be a full-scale one, if the instrumental and methodological complex will include: system, tectological, managerial, psychological, behavioral, structural and functional, cultural, axiological, activity, pedagogical, specific historical, comprehensive approaches [469, p. 65]. In our opinion, it is useful to add to this the synergistic, milogical, hermeneutic and other approaches, as the more views on the subject are realized the more comprehensively they will be reproduced.

Our choice, that represents recognition of system-factor of instrumental and cognitive complex of the system approach, determined by the fact, that in the sphere of philosophical analyses the same laws and patterns actual as in other spheres of theoretical work – biological and technical. There, first of all we have the law of the law of working time economy and we have to limit ourselves in some

way. Reduction in such case, if it doesn't restrict a researcher in the achievement of planned result, is quite a justified step.

We shall start with evaluation of system approach and it should not be confused with system method. E. Semeniuk, clarifying peculiar feature of cognitive approach from method of cognition, proposes and justifies the theoretical solution of important methodological issue, which has still been out of sight for native and foreign researchers and formulates a detailed description of the cognitive approach. According to the definition of Lviv scientist, an approach to cognition in science is a logical-gnoseological and methodological formation, which very clearly expresses only focus of research, reducing it as usually to one aspect (at least by several interconnected directions), but despite the method, it is essentially devoid of any restriction or even accurate fixing of the means by which the research is carried out». The proposed definition appears to be quite productive.

To use the systematic approach as a leading algorithm of investigation we need to display the mechanism of its use, i.e. build a specific scheme of explaining of the research subject. Under the scheme of explanation «we understand the way of organization of conceptual apparatus, which sets the overall strategy of research » [542, p. 122]. At the same time, all approaches to study of the feedback mentioned above are used in the discourse of systematic approach.

Systematic approach as a specific method of scientific cognition became widespread in the works of many researchers. Considerable contribution to the methodology of systematic studies was made by V. Afanasyev, I. Blauberg, M. Kagan, V. Kartashov, D. Kliloved, V. Kusmin, O. Leontyev, V. Sadovskiy, G. Schedrovitskiy, E. Judin and others.

Specificity of systematic approach was deeply studied by E. Yudin, who distinguished its following characteristics: 1) the starting point of any systematic research is the idea of the integrity of system which is investigated; 2) understanding of the integrity of the system is specified through the notion of connection; 3) set of links and their typological characteristics result in terms of the



structure and organization of the system; 4) structure of the system is described both as the «horizontal» (relations between homogeneous components of the system, such as connection type «direct link – Feedback»), and as «vertical» (eg., connections of management and connections of self-regulation, which leads to the notion of levels and hierarchy of these levels); 5) management – varied in form and «rigidity» means of levels' connections, which provide normal functioning and development of a system; 6) availability of goal's problem and purposeful nature of its behavior; 7) the source of system transformation or its functions usually lay in the system itself, as it appears to be self organizing formation; 8) there is a problem of correlation of system's functioning and development, where both synchronous and diachronic «sections» would be taken into consideration [542, p. 134–135].

Then proceed to the analysis of heuristic weight of the leading principle of our study – the activity principle, as it forms substantial basis – ontologically homogeneous system, which comprises of three types of management and appears to be a system-creating principle of the problem field of the study. The universality of «activity» concept generates such unique property as multifunctional phenomenon, which is realized in the field of technology, biotechnology of the living and society. This list also gets materialized and / alienated activity or organizational experience embracing all our experience, taken from the organizational point of view, i.e. as the world of organizing and disorganizing processes» [65, p. 73].

Therefore, in our case, activity plays at least seven functions: 1) activity as an explanatory principle; 2) activities as a matter of objective scientific analysis, i.e. as one that is divided, reproduced in theoretical picture of a scientific paradigm namely: organizational external and internal work of an individual; 3) activity as substantial base of family life of an individual, which determines morphology of functional systems; 4) activity as a subject of management;

5) activity as a subject of planning; 6) activity as social value; 7) social activity as a subject of theoretical generalization and imitation in the form of search and reproduction of common spiritual products of different epochs [542, pp. 134–135].

Thus, while creating the philosophical principles of general management theory formation it is rather important for us to understand methodological variety of the concept «activity», as it is its usage that reproduces the unity of organizational sphere of our being.

Another powerful means without which the fullness of methodological complex of our study is not conceivable is the principle of cognitive analyses. Due to genetic connection of the approach and the principle we have to mention the principle of consistency. At present the active use of the principle of consistency caused special attention to the traditional for science classification problems. The theory of classification (ordering) that is increasingly emerging is called typology, instead of traditional and the ones originating from biology «taxonomy», «systematics» [390].

The principle of synergetic allows to study the mechanism of management philosophy establishment as a cognitive structure of the forming of general theory of management, to its elucidation considerable contribution was made by the founders of synergetic paradigm: S. Kapitsia, O. Kniazeva, S. Kurdiumov, M. Moiseiev, I. Prigozhin, I. Stengers, R. Toma, G. Khaken, as well as V. Arnold, A. Arshinov, V. Branskiy, L. Bevzenko, V. Bekh, V. Vasilkova, A. Vengerov, L. Gorbunova, A. Davidov, I. Yershova-Babenko, S. Krymskiy, O. Kutsenko, V. Lutai, M. Ozhevan, S. Pozharskiy, M. Popovych, I. Predborska, Y. Romanenko, Y. Romanovskiy, A. Rudenko, Y. Sayenko, Y. Siedov, Y. Svirkiy, T. Tytarenko, I. Chernenko, S. Shnol, P. Shtompka and others.

Besides, in the research for explanation of the processes of the forming, establishing, functioning and development, the principle of overall connection, principle of comprehensiveness, principle of objectiveness, ontological (material and spiritual) and functional unity of social world, principle of theory and practice unity etc.,



which will be supplemented, following L. Bevzenko [34, p. 52], by principles of indeterminism (non-linear determinism), unpredictability, non-teleologicity, multi causality, irreversibility, variability etc. At the same time seven principles of synergetic will help to clarify the specificity of thinking in the field of evolving system-processes: two principles of being (homogeneous static and hierarchy) and five principles of development (nonlinearity, instability, non-isolation, dynamic hierarchy, observation) [22, 79].

The principle of unity can be characterized as to some extent generalization, transformation of categories «the part» and «the whole», laws of their interactions. The part and the whole are closely connected between each other. The whole has its sense only in relation to its parts, from which it is formed, and the part is unthinkable outside the whole. As rightly noted by T. Pavlov, «If the whole does not comprise of different parts, it is not and can't be the whole. Parts, for their part, not having the peculiarities, indicating their role as parts, can't be parts of their whole and therefore the whole wouldn't be the whole and parts wouldn't be its parts» [336, p. 47].

In our case it creates possibility to trace the relationship of individual and social organizational consciousness and culture on the one hand, and on the other one to imagine each of mentioned phenomena as a complex integrative formation, where all the elements are interconnected and interdependent, so that it's impossible to understand the whole without any of them.

Special emphasis while choosing means of cognitive analyses should be done on methods of management philosophy construction. We consider method as the unity of approach and principles of investigation [69]. It is method, connection of which with an approach is mediated (as a rule by the doctrine, certain system of knowledge, created on its basis), appears to be internal, organic unity of cognitive approach and certain research techniques.

As discourses of technical, biological and social systems management are very far from each other and have their own



semantic field, then to bring them into consistent picture we need and will use all the variety of methods of philosophic analyses. Among them we emphasize on systemic, genetic, dialectical, synergetic, hermeneutic, comparative ones, on idealization, modeling and others.

Then we need to define the order of application of the established by us complex of methodological tools. As it is known, there are only two of them: induction and deduction. Research tool removes the antithesis between the theoretical and the practical, historical and logical. That is why proceeding from abstract to specific is the way to research the coherent object, that is developing and application of it becomes possible in philosophy and science, which have reached certain theoretical maturity. Of course, this method can effectively explore the organizational interaction of technical, biological and social systems in all their beauty and complexity, because interaction is, as well known from the classical theoretical research, final link, which can be generally explored:

- firstly, as dialectical contradiction, which comprises of opposites (principle of dialectics);
- secondly, as the unity of the substrate (structure) and attribute (function), i.e. a living substance (principle of substance);
- thirdly, in all their major connections and mediation (principle of universal connection);
- fourthly, in the process of their development from the simplest forms of organization to more complicated and superior (principle of development);
- fifthly, based on the internal contradictions of subjective and objective, what is held in this concept (principle of contradiction);
- sixthly, as source of basic conflict is taken the one, which is singled out as a result of theoretical and practical activity of a person (principle of theory and practice unity);
- seventhly, this is the very reason why social organism appears in thinking to be «the unity in diversity» (the principle of



wholeness) eighthly, as organic integrity of the material and the spiritual (principle of duality);

— ninthly, as integrity and plurality (principle of synarchia).

At the next stage of selecting of cognitive analysis tools of the research subject we have to form the categories of analytical work in technical, biological and social spheres, means at the same time to lay the semantic basis for the working out of general theory of management. It is rather specific [323].

It comes from the fact, that in any research concepts appear to be axiomatic means, and philosophical analyses of categorical apparatus of management of technical, biological and social systems is not an exception. Functional role of scientific concepts including the concept of «management philosophy» in theoretical analyses and practical investigations is polyhedral.

Firstly, the concepts are the main elements of theories, they accumulate and transfer considerable part of our knowledge about real life and enable its description and explanation. Secondly, concepts provide scientific communication. Thirdly, concepts are like «logical atoms of our intellectual activity perform heuristic function, being working tools of scientific research» [547, p. 23].

At the same time two fundamental methodological observations are worth considering. First of them concerns with the fact, that in the research concepts play different roles. To understand them, it is necessary to reveal the mechanism of heuristic activation of concepts. It functions, as it is known, through comparison of noumenal items – senses, which are fixed in concepts. As the mechanism of action concepts is based on a comparison of meanings, which they contain then it appears outside as a language. Through language, the spiritual world expresses itself in the objective reality. The language acts here, according to O. Bogdanov, as organizational process, and the one having the universal nature [66, p. 110].

In the sphere of technical, biological and social development management the problem of semantic origin is emerging, which only philosophy can solve? The sense of it is that it's better for the



society to transfer it from generation to generation on the basis of theory, in contrast to exceptionally on the basis of praxeological principles of relations between generations: in other words, the theory and practice of practical experience must mutually assist to each other in the process of education.

But not always can specialists of different fields find or develop common language (slang) and then they can't identify the problem for which they gathered and can't transfer it to the list of tasks and solve it. They repeat the fate of the builders of Babel Tower (Genesis 11:1 – 9).

To carry out selection of categories of a research means to «ground», to give practical direction and provide instrumental capacity to solve the tasks and to realize the goal of the study.

According to stated above it is necessary to select categories of research. The concepts used as a means of learning the subject may be divided into at least five groups to which a systemic or structural-functional analyzes should correspond. The first group are concepts, which have to reveal the philosophical main characteristics of the phenomenon of technical, biological and social systems management; the second group – to reproduce the morphological analysis of system's management of technical, biological and social systems; the third group – to provide qualitative functional analyses of typological systems of management; the fourth group – to characterize cratological analysis of the state and potential of typological systems of management; the fifth group – to evaluate cognitive potential of generic or general theory of management.

The first group of concepts, which has to reveal main philosophical characteristics of the management phenomenon should include: genesis of management, nature, sense, content, form and types of management, subject, object, type of thinking, organizational consciousness, organizational outlook and culture, ideology and methodology of scientific research, causality and its types, space and time, etc.

To the second group of concepts, which should reveal morphological analyses of technical, biological, and social systems



management, we includes: elements, structure, system, hierarchical levels, principles of the structure formation, institutional design, organ, connection, relation, organization, interaction, scope, topology of systems management, the state of systems' management: homeostasis, homeorhesis, homeoklasis, channels of managerial communication, laws, structures and others.

The third group of concepts, which has to provide qualitative functional analyses of the generic systems in our opinion should include: function, activity, organization, self-organization, self-regulation, technology of management, regime of functioning, the type of activity of subject of management, reaction of the object to managerial influence, regime of functioning, type and kind of managerial information, laws of functioning etc.

The fourth group of concepts, which has to characterize cratological analyses of the state and potential of generic systems of management, should, in our opinion, include the following: power, the form of using the power, types of influence, regulation, leadership, command/submission, criterion of effectiveness, indicators of results, goal formation, goal-setting, form of behavior, style of management, channel of influence, type of management quality control, feedback, organ of self-regulation, type of regulation, means of regulation, range of regulation, laws of regulation etc.

The fifth group of concepts, thanks to which we have to evaluate cognitive potential of generic or general theory of management, should include: subject of study, methods of study, contradictions of development and functioning, laws and regularity of management.

Thus, to make conclusions to this subsection we should note that methodology of theoretical research of management philosophy is rather delicate, where it's necessary to choose means of cognitive analyses for cognitive process of semantic principles of general theory management formation. This fact alone should be emphasized, because studying the philosophical basis of this phenomenon formation as general theory of management we don't



seal with the management, but single out only its philosophical component – cognitive basis which comprises, according to our working hypothesis, of the set of philosophical principles and determinants.

In addition, we need to understand here, that system is not a usual object of study such as those studied in the specific sciences, but special methodology and strategy of thinking. This is first of all, and secondly, that philosophical and scientific cognition, which use the systemic approach, must always keep duality: in one layer a scientist moves in the plane of his subject (philosophical, natural-scientific, humanitarian, social), trying not to miss any of the characteristics, necessary for cognitional tasks solving, which is studied, and in another – in the plane of the system-structural representations. Thirdly, he must avoid reduction and observe that characteristics of images-structures do not contradict the characteristics of the phenomenon, which is studied.

Conclusions to the first chapter

Philosophical principles of general management theory formation are reasoning of nature, essence, content and forms of technical, biological and social systems management, and also formation of organizational consciousness, organizational outlook and culture, creation of ideology and methodology of investigation; are the conceptual basis for practical development of tasks of creation of holistic general theory of management. To meet the needs of philosophical provision of study of cognitive principles of general management theory formation a separate area of philosophical reflection – management philosophy has been formed in practice.



Problems and inhibition in the foundation of the general theory of management are that philosophers «haven't come to» the phenomenon of management yet, and theoreticians of management on the contrary «haven't gone up» to philosophy. In practice, there exists a situation of neutrality; to wit the entire equals the sum of two parts. This condition discourages the development of science – cybernetics, general theory of management, integrative theory of management or tectology.

Analyses of philosophical conceptions of East and West in the discourse of their relation to the phenomenon of management shows, that they have different approaches to its perception: in the East management is considered as in organic unity of technical, biological and social systems of individual, which is subordinated to the laws of the whole, and on the West an opposite approach is cultivated, which makes rationalism absolute and increases goal-rational ability of a person, who is supposed to subordinate everything to his own interests and needs.

In the retrospective analysis of philosophical approaches to the formation of the organic and general theory of management in the area of different cultures, peoples and epochs it has been clarified, that deep sense of management problems is unchangeable, only certain forms of this or that managerial problem's solution change historically.

The current state of affairs in the field of management is accompanied by the explosion of managerial conceptions, which are consciously or subconsciously directed to the recognition of organism-like structure of the social world, i.e. oriented to Chinese understanding of the place and role of personality in the Universe, which opens perspectives of generalization of ideological principles of the general theory of management, as technical, biological and social systems are the results of activity of one subject – individual.

Methodological component of this work is to select a complex of analyses tools for the philosophy of management foundation, in the fairway of which should be justified the specifics of



organizational consciousness, organizational outlook, ideology and methodology of study of philosophical principles of the formation of general theory of technical, biological and social systems management theory. To bring them to the organic unity it is suggested to apply offered by M. Foukalut dispositif, which has the ability to bring together diverse characteristics and take into account their specificity.

It is recognized, that systemic approach and principle promotes the research goal's achievement; the list of most effective principles and methods has been marked, the priority of moving up from the abstract to the concrete method has been recognized. The categorical apparatus builds semantic area of cognitive analyses and promotes establishing of analytical algorithms of management philosophy analyses.

Next stage in the investigation must be connected with the analyses of management philosophy as a systemic methodological means, which is directed to philosophical provision of main perspective-ideological and methodological principles of general management theory formation.

Chapter 2

SOCIAL AND PHILOSOPHIC MATRIX OF FORMATION OF THE GENERAL THEORY OF MANAGEMENT

2.1. The philosophy of management as a tool and semantic field of forming the general theory

The aim of this unit is to create a management philosophy as a specific field of theoretical knowledge for ontology, epistemology and methodology of technical, biological and social systems which formalizes the system of philosophical concepts and categories to explain the management, i.e. it provides the ability to justify theoretically the organizational phenomenon and a general theory of management.

Here, above all, it is vital to listen to the advice of A. Bogdanov, «Often it happened that one branch of technology or knowledge fruitlessly fought under its old, clunky methods which have been exhausted, while in another area, along with it new methods existed but they remained unknown or confusing for it, which would easily solve unbearable tasks for the latter», and Norbert Wiener, the founder of cybernetics (1948): «Important studies are delayed due to the fact



that in a given area known results that have become classics, the remain unknown in the adjacent field» [64, p. 96–97, 94, p. 136].

At the empirical level, the process of summing philosophical explanation for the formation of a general theory of management is underway. There are all the signs of intense formation of a specific direction that has received appropriate cognitive processing – «management philosophy» or «philosophy of management. «The difference, in our view lies in the application. The first covers the technical, biological and social systems, and the second – only social.

As the question of the meaning of life, the problem of the subject of management philosophy comes to the forefront of professional identity in different countries for two reasons: a) in the initial period of discipline, she is just trying to become its own likeness, b) or in the crucial moments of its historical destiny, when changing of the socio-cultural paradigms of governance generates radical internal shifts in its structure and content.

Domestic and foreign researchers are working over the filling of the content of the management philosophy. Here is the typical approach to address this problem in the theoretical field of social philosophy. Management theory in the interpretation of P. Drucker, for example, especially if you compare it with the school of scientific management, is a philosophy, influenced by the ideas of liberal humanism, decentralization, strategy priority over the structure. P. Drucker's merit here is that he tried to synthesize the achievements of schools of the scientific management and human relations, developing an approach from the position of project management.

According to P. Drucker, management based on goals and self-control should be called «management philosophy», as it is based on the concept of management as such, the analysis of the specific needs of management, the concept of human activity and it can be used by the manager in his practice. One of the main problems for P. Drucker is an idea of responsibility of the management society, which is to a



personal interest that is a public good. He believes that hard work, the highest qualification of a manager, a high sense of responsibility and a broader view of issues are necessary for the harmonization of private and public interests [99, p. 25].

There is a need to clarify the meaning of the term «management philosophy. This means that we must answer some questions, namely: what is the subject of the study? What are the objectives it sets itself? What functions does it have? It is required by the logic of the solving of our research objectives. In today's reality it is still immature and complex phenomenon. Already one of the first publications on this topic has found very relevant observation: «Not a clear use of the term» management philosophy is obvious. According to our observations, the confusion among those who write about the problems of management philosophy, are caused primarily because of confusion around the term «philosophy» [561].

The problem of the research of the subject should be classified as one which exists in any of the humanities disciplines, including philosophy and management. However, it should be borne in mind that there are different, even very far from each other, and sometimes diametrically opposed approaches to the understanding of management philosophy and purpose, the definition of its subject, goals and objectives of the study. Our attempt to determine the subject of management philosophy is similar to the likes of its segments philosophical knowledge, for example, philosophical anthropology, philosophy of law, philosophy of technology did not lead to a positive result, as in these cases we did not find significant similarities of the subjects [490, p. 23]. However, methodological discipline makes us turn to the definition of the object and subject of science as a whole and translate their requirements into the problem field of the study.

The object of cognition is usually referred as something that is directed by cognitive activity of a researcher. The object of research is the outside material world and its shapes reflected in people's minds that exist independently from our consciousness, which are



selected according to the purpose of the study. It is possible to investigate not only empirical object (product quality, production costs), but also theoretical (action of the law of cost).

Under these conditions, in this case, the object of study should be considered as an organizational activity, as all-encompassing and universal phenomenon of management. This was pointed out by Alexander Bogdanov in the second volume of his famous work «Tectology». He wrote: «The starting point of tectology approach is the recognition of the need to the study of any phenomenon in terms of its organization. Accept an organizational point of view means to study any system as relations of all its parts, and its relationship with the environment as a whole, i.e. with all external systems. Laws of the systems are the same for any object, the most diverse phenomena are combined by general structural constraints and laws: «...structural relationships can be generalized to the same degree of purity of formal schemes as in mathematics related variables and on this basis organizational problems can be solved by methods similar to mathematical methods. Moreover, the quantitative relationship I see as a special type of structure, and the same math – as previously developed, due to special reasons, a branch of general organizational science: this explains the huge practical power of mathematics as a tool of life organizing» [65].

According to an organizational point of view the world is considered by A. Bogdanov as such, which is in continuous change, there is nothing permanent, everything changes its nature, action and reaction. Due to the interaction of elements that change, the observer can identify certain types of complexes that differ in their degree of organization. Organized complex is determined by tectology on the basis of «the whole is greater than the sum of its parts», while the larger unit differs from most parts of the sum, the more it is organized. In unorganized sets the whole is less than the sum of its parts. And finally, in neutral complexes the whole is equal to the sum of its parts.



Subject of cognition is studied for a purpose of properties attitude to the subject. For example, all sciences, in principle, investigate one object – society, but have different subjects: political economy – the system of industrial relations, economic statistics – quantitative aspect of economic phenomena, accounting, analysis and audit – the economic entrepreneurs' activity at all.

Under these conditions, management philosophy has as its not all organizational human activities, but specific philosophical thinking, and that party that aspect, that point of view, from which the researcher learns coherent object, highlighting the main, most important features. They, important features are semantic determinants that create the philosophical principles of forming a general theory of management. The purpose of philosophical reflection is building of «dispositive» of management.

Researchers working in the field of management philosophy, almost as one, silently ignore the question of its subject. However, V. Mirzoyan said that «management philosophy claims to be a generic, conceptual and semantic analysis of theoretical and methodological problems of management, to clarify the methodological basis of management concepts and evolution of the major paradigms, as well as the development of behavioral and ethical code of the effective functioning of the organization. Underestimating the role of philosophy leads private-academic pursuits it theoretical and methodological impasse» [298]. This conclusion of the researcher certainly deserves attention.

V. Rozin asks at his work «management philosophy» [389, p. 173–174]: «What is the purpose of philosophy?» And he answers himself: «In our view, as follows. Philosopher deals with criticism and differentiations of reality, which, in his view, is exhausted and needs to leave the scene of history. Next, philosophy constitutes a new reality, but through standardization of new methods of obtaining knowledge about the world, in other words, setting itself anew in thinking. No less significantly, by doing all this, philosophy answers the persistent challenges, but responses, as they say, in a personal way. It is



understood that a new constituent reality, responding to challenges, the philosopher expresses himself, enters into a dialogue with their teachers and other thinkers, and introduces his own vision of reality and understanding of the issues. Constituting a new reality, philosopher discusses and defines the essence of the phenomenon of interest to him. If you include all these management requirements, it might look like as the object of management philosophy.

Philosopher of management should exercise criticism of unsatisfactory established ways of learning management. In this respect, it is very revealing work of A. Tikhonov, where he analyzes and criticizes all major methods of research administration (management theory, system, process, situational, synergistic approaches) [455,p.122–132].

Constituting the essence of management is the second major unit of work under the management philosophy. In turn, there are several relevant areas of research. First, it is a comparative analysis of management concepts, especially in terms of approaches and basic ways of thinking. Second, these are the genetic studies of major types of management that have taken place in the history of culture. Thirdly, building own management concepts, covering not only the essence of management, but its different types.

The third area of work is analysis of a broader reality that causes different types of controls, as well as their evolution. It involves consideration of the philosophical and methodological topics such as language, society, person, government, social institutions and others, such as the study of mega tendencies of modernity, ideas about the future of social action strategies, forms of social life, social evolution, features of Russian model of governance and its evolution. For example, in the book «Sociology of management» A. Tikhonov discusses the essence of management in the wider context caused by a new approach that A. N. Tikhonov calls «socio-humane» [455, p. 120–160].

It is clear that the study of phenomena that define management should lead in terms of features and problems of management. For



example, in the study of personality it makes sense to consider the role of ideas in the development of management (person as the manager himself), the basic personality types, in particular, the difference between unique and popular personalities, analysis of the individual leader, manager and worker, the problem of handling personality, individual crisis in modernity, person-oriented practices, myths and languages of the individual et al.

G. Sorina presents the subject of philosophy of management in a such way [426, p. 23] identification of the philosophical assumptions of theories formulated in management, representing different management ideas in philosophical concepts, research of intersecting parts of the conceptual apparatus of philosophy and management, disclosure of logical and philosophical foundations of intellectual activity and demonstration of forms of its manifestation in management theory».

B. Diyev defines the following areas of philosophical analysis: the analysis of philosophical and epistemological premise of managerial activities, comprehension of activities and managerial background in the field of knowledge management, evaluation of values that correlate with the activity of a manager, evaluation of managerial approaches and actions in terms of ethics and social significance [152, p. 60].

According to V. Polikarpov, the philosophical basis in terms of activity also includes a provision stating that «modern society is a complex, non-linear, multi-dimensional and has a multi-character, so it is fruitful to analyze management problems from the point of multi-model design with the relevant system of activity: economy (economic activity), politics (political activity), education (educational activity), religion and philosophy (philosophical activity), art (art work), science (research activity) and technology (technical operations), between which there is a deep interconnection and interdependence. Equally significant is the position that a man is the main link of complex and differentiated society where he or she serves as a system forming factor of the



society which develops dynamically, and culture, the subject of various systems of activity and management» [351, p. 14].

According to the reputable local researchers of problems of social management, V. Kremen, C. Pazynich and A. Ponomarev, its aim is, firstly, the study of nature, essence and the most common patterns of management as a specific social phenomenon [227, p. 133–134]. Secondly, management philosophy has to define the philosophical, spiritual, moral and ethical values and social aspects of management, its role and importance in social progress and cultural development. Thirdly, management philosophy is designed to be a theoretical basis for the formation of management methodology and fundamental principles of effective implementation. Finally, fourthly, the management philosophy has to determine main roads and trends in the nature and methods of social management, depending on the logic of social development, scientific and social progress.

So, according to the given above results of analysis it can be stated that the ideological and methodological component of our research is precisely what is the subject of management philosophy, namely, to identify the nature of management, the study of nature and the sources of the genesis and development of this complex phenomenon, the analysis of the overall structure and its inherent tendencies and contradictions.

These are the elements that form the philosophical basis for theoretical study of any phenomenon that we call the subject of specific philosophical knowledge. If we return to the subject of our study, it is the subject of management philosophy, we: a) call the philosophical principles, as opposed to the metaphysical, ontological, cultural, anthropological, existential, and b) they create meaning and philosophical foundations for the formation of management theory.

For management philosophy is quite important to have a clear initial theoretical model of the world, society, human and those existential structures that bind them together. These models,



management of technical, biological and social systems, are necessary for management philosophy to rely on them in the analysis of more specific problems. In one form or another, explicitly or implicitly they certainly are present in the philosophical, methodological, theoretical research facilities, dictating certain logic of theoretical research, offering some targeted programs, highlighting realities as the object and the subject of the study.

Separation of object (ontological reality) and subject (epistemological reality) does not interfere with humanities disciplines which strive to ensure that mismatch between one and another for each should be shortened as the distance between Achilles and the tortoise in Zenon's story. Thus, the more complete and higher the degree of coincidence of the ontological and epistemological realities, the better it is going to be analytical work and its significant achievements in the field of management philosophy.

Content of management is not physically tangible objectivity but norms, values and meanings. Operating them, the human mind is building on its specific characteristics and properties the reality which is called organizational reality. The legislation establishes management experience in the strict rules of law. In organizational reality, despite the fact that the nature of its components is predominantly spiritual, perfect character, it should not be socio-cultural substratum, without which neither orders, nor rules, value, nor would sense of entitlement be able to influence people. Substrate is usually called sensible grounds of perfectly spiritual realities that affect humans.

Thus, in general terms, management philosophy examines methodological and ideological foundations of organizational processes in society and human relations that arise in the implementation of these processes and the consequences arising out of their realization. The famous British philosopher Bertrand Russell deems it necessary to add to this as «the study of creative



philosophical approaches to address specific management problems with the help of productive and non-productive areas of human activity» [381, p. 5].

Our view on the subject of management philosophy is somewhat broader, since it must cover the three types of control held by the term «cybernetics», namely, management of technical, biological and social systems. At the level of empirical reflection it can indeed give the impression that they are far apart and are almost independent from each other. That is why we have to find for them an integrative factor and lay it in the subject of management philosophy.

We believe that all three systems should have one ontological framework and different forms of life, but the relative content of organizational processes with access to self-regulating level at which they come into close organizational cooperation. It is our working hypothesis that needs to be proved in the case of a negative result it makes no sense to continue the search work in this area.

Familiarity with the content and forms of technical, biological and social systems convinces us that it is supposedly three different areas with specific subjects and objects management, logic design and structure, principles, tools, methods and ethics of management, criteria and indicators of its effectiveness, especially far they differ in categorical apparatus, that are very different from each by a professional slang. And it's not just a play of words.

Structure of philosophical knowledge as tribal design led architecture of species formation to management philosophy. Therefore, the general outlines of management philosophy can already be imagined from the analysis of numerous studies of the management problems from common methodological positions.

Among Its framework, firstly, we note ontology management, its nature as a specific social phenomenon. Ontology, as a philosophy of life, acts of the general concepts of life, and as ontology management answers the question what the general phenomenon of governance is, what its importance and role are in



the life and activity of the individual as a social being, tries to ensure the functioning of different communities and society as a whole, as the main form of human existence and activities, and what the nature of social management is.

Secondly, epistemology of management as a theoretical basis of knowledge of the phenomenon and its laws play an important role for the cognition and understanding of the philosophical nature and essence of the phenomenon of management. Management epistemology answers the question, what the essence and nature of the phenomenon of management are, how it is most advisable to explore, how we can understand and grasp its essence. Good management is not possible excluding its provisions relating to the relationship between subject and object in the cognitive-reforming activities and their management.

Thirdly, logic control takes an important place in the structure of management philosophy. The logic in the modern sense is a science, not only the forms and methods of rational thought, or correct judgments, but also the forms and methods of rational human activity. This rationality is the compliance of the objectives and activities as the laws of activities and patterns of self-relevant social system. Logic control answers the question of what the impact of management should be and how to make it most appropriate in a given situation.

Fourthly, a major component of the management philosophy is axiology management as a means of influence it uses for the values and meanings. As a part of the general theory of the nature of values, it explores the properties of objects and phenomena that are the aims of activities and their management and which are able to meet the needs and interests of the individual and society as a whole.

Fifthly, an important part of the structure of the management philosophy is ethics management which is based on the system of human and professional standards. It reflects the moral aspects of the complex of social relations, and especially their manifestation in



the social management. Ethics management answers the question of how management decisions and their possible impacts and consequences relate to the norms and principles of the moral paradigm adopted in the society.

Sixthly, essential and the most important component of management philosophy as an academic discipline of undoubtedly applied direction should be considered management methodology. Under the methodology of social management it should be understood a set of the most general principles of the management process, methods, forms and means by which the achievement of the desired performance is ensured and it should be ensured. This quality of management methodology answers the question, what principles should be the basis of management, effective and implementation of management decisions and actions.

Sometimes the problems of management philosophy and its components are also the question of the ideology of management as a set of beliefs and ideas that define a particular holistic approach to the selection of the management structure of the system, the policy of its implementation, as well as the objectives, content and specific methods used and technology management. Often, management practices, and sometimes in theory, there are attempts to combine the identification of the concept of management ideology with management philosophy in general.

In our opinion, such a global statement about the subject matter and objectives of management philosophy is quite justified also because that the content of techno- sphere and biosphere, and socio- sphere creates a unified ontological substance which is in the orderly structural form that is known to us, the researchers, as the body: technical, biological and social. The space of their life in the structure of the universe determines the type of material (by O. Bazaluk): inert (technical body), living (biological body), and reasonable living (social body). That is why «in nature the same goals are achieved in various ways, according to A. Bogdanov» [26–30, 64, p. 164].



The introduction of the concept of social «body» as a unit of modern socio-humanitarian analysis meets the need of the contemporary social science in the fuller philosophical ontology of reality being studied because such semantic structures in one step the unity of subject and object of social action and interaction is kept, their historical and socio-cultural conditioning, arising integrity that falls into pieces» [455, p. 132].

This means that for the post-nonclassical period there is a need in new methodological techniques and new models to simultaneously synthesize a larger number of processes and phenomena of increasing complexity within the whole. «In modern science the leading role of the method of obtaining new knowledge through simulation or schematic practice or abstraction of its ideal objects is lost. Scientific knowledge within post-nonclassical rationality can be built into the design of the universal characteristics of management systems that meet the epistemic ideal of science and values of post humanitarian perspective» [455, p. 166].

«The introduction of the concept of social body» is due to three trends in learning of management problems: 1) recognition of the limited content capacity of systemic management approach, 2) poor attempts to present social system as an objective and impersonal phenomenon, and 3) a limited ability of action approach as the basis for the construction of public sciences, in which activity is exogenous and not subjective.

Can we consider the technical, biological, social «body» and other properties mentioned herein as a substance (dispositive) of management? In theory, yes, if you combine them into a social whole – the social body of the planet. In cognitive field its counterpart is an organism idea of global social structure of life that has the field form.

Some management theorists direct statement that the production and organization are forms of social life that are not much different from biological [389, p. 198]. «Everything is in the nature – says



R. Pascal. – Let us define immediately. Organizations are living systems. This is not a metaphor» [84]. It is supported by other researchers. «Of course – says Robert Salmon – that in relation to the organization of a living organism in itself it does not prove anything, and in any case we can just copy algorithm, proposed by nature. However, the fact remains that taking into account currently prevailing trends, the share of mechanistic logic, based on consideration out of context, repeated duplication of quantitative uniformity is sealed in advance. Today, in light of the continuous process of change and complexity of relationships a priority is the development of a vision system, which is based on quality, organic logic. In practice, this means that the company can be considered as a living organism, the operation of which depends on inter-systemic independent and external interactions» [396, p. 241]. It should be added the organism conception of social life of the researcher W. Bekh [47].

There are four powerful arguments in favor of a positive solution to the problem of development of philosophical principles for the management and creation of an integrated management theory through technical, biological and social systems.

The first argument is that the technique, personality and social system are the product of productive human activity [402–403]. Secondly, management activities on these three systems have the same subject – the human personality. Thirdly, in the social body of the planet, these processes are naturally integrated into a single organic process of life of planetary community. Fourthly, technical, biological and social systems are incorporated to form homeostat morphology and perform differentiated functions in it, and together they provide the functioning of the mechanism of self-planetary social body.

Thus, it makes sense to agree with the findings of sociologists that the management of technical, biological and social spheres should be viewed as a mechanism to «maintain social order» as a form that allows you to «keep the spontaneous course of life in some limits, to direct it to the desired state» [455, p. 146, 147].



It is worth making another important remark. It concerns the genesis of the segments of the research field of our study. The basic element here is the biological systems as natural products. Through a pulsating rhythm of the internal relations of opposites any administrative reality is in its inherent quality, splits and recombines into a unity again, it stays the same and becomes different; it is exposed to entropy and actively opposes it.

Technical and social systems are artificial creations that belong to the so-called second nature. It is a biological man trying to increase his influence on the nature, invented and created technical systems. And to influence society with selfish desire to conquer it, a man established social systems – social organization [455, p. 142, 144].

Thus, the technical systems and social organizations are the product of man, and therefore it is quite possible to harmonize them with the properties of the creator in theory and practice! G. Hegel, for example, stated that «the medium term» – mediation – «is the nerve of evidence; it is something only because of how this relationship manifests itself and where it becomes external» [105, p. 275]. Elsewhere he defined mediation «as equality itself that is in motion.

Thus, biological systems are the backbone structures not only in the ontological matrix of the social world, but also in management. One can take a look from the other angle and see another line: corporation as a machine, as a system and the organization as a body.

Therefore, management philosophy does not compete with the theory of management as it addresses issues that go along its disciplines. If, for example, it is quite sufficient and understandable for management theory to accept the statement according to which the basis for the management of people or territory is the will of the state, for a management philosophy that is not enough. Therefore, it reflects not only on what moves the will of the state, but seeks and finds a lot of other causal-explanatory models of management genesis as applying power and law.



Management is part and, simultaneously, function of organized systems of different nature (biological, social, technical, etc.), it also maintains their structure, mode of support, the program and purpose of activity.

Science of management creates, organizes and disseminates knowledge, how to carry out management activities.

Management theory is the knowledge how to carry out management activities. Common patterns found by cybernetics, the science about the general principles and techniques of complex systems in nature, technology and society.

The subject of the science of management is the management relationships, which embrace simultaneously economic, social and political relationships and interests that find expression in action on society or its individual elements with a view to organize and preserve the qualitative specific of improvement and development. The subject of management science is also technologies and management techniques, trends of development in management practices.

Objects of management can be industry branches (heavy industry, agriculture, transport), the territorial communities of people (region, district, city), the individual stages of reproduction (production, supply, marketing) aspects of economic activity (product quality, interaction with the consumer, marketing), the types of resources (financial, human), and production characteristics (performance, attitude to work, quality of life, employment).

Subjects of management can be director, manager, board of directors, mayor, city council, head of department, a group of checking quality, the city chamber of commerce, as well as any other group of people engaged in management action on an object of management.

Management philosophy embraces organizational phenomena in the broadest context of cultural and historical realities where it finds over-senses. It turns out that the chain of meanings and reasons that lie behind them is truly endless, and it is pointless to expect that



some day we will have a comprehensive universal formula of «perfect management» that could cater for all ages and absolutely everyone.

Doing a detailed study of the state of the management philosophy, we conclude that today It is appropriate to consider the subject of management philosophy as a set of these six specific groups of problems: 1) overall management philosophy, 2) the conditions of its formation and 3) the difficulty of its formation; 4) general problems of modern management philosophy, 5) its specific problems, 6) prospects of development [227, p. 119].

Overall condition of management philosophy as an independent branch of philosophical knowledge and as a theoretical, philosophical and methodological foundations of modern scientific management of social systems that are characterized by, firstly, public recognition of the need for management philosophy with namely such an understanding of its nature and purpose, and secondly, vague certainty of its conceptual and categorical apparatus.

For building a management philosophy, on the one hand, the real needs of social practice act, especially related to the peculiarities of the post-industrial stage of development of human civilization, and the other hand the overall development of philosophical thought and reflection of modern challenges.

The difficulties of forming of management philosophy relate primarily to the lack of unity of methodological principles and approaches as to understanding of its nature and object of study, and to understanding the essence and nature of the phenomenon of management, and management of social systems. In addition, there is a significant diversity of areas and sectors of social management, its various goals and objectives.

Common problems of modern management philosophy are caused, in the first place, by the various philosophical positions of researchers and uncertain approaches to the study of the subject, and secondly, by rethinking the role of personality factors in ensuring

the effectiveness of social production and the need of developing new management paradigm and its gradual shift towards socio and psychological, ethical and value issues.

The specific problems of management philosophy should be considered, on the one hand, its dependence on a number of factors of different nature and character, and on the other hand, change of objectives and the nature of management, which occurs as a result of a transformation in the understanding of its essence.

Prospects of development of management philosophy for the near future should be considered, especially the completion of its structure, conceptual and categorical apparatus and the development of methodological foundations of management.

Consequently, management philosophy can, in our opinion, to answer the demands of today's world and recreate the specific basis which will form a general theory of management with cognitive principles. Although many experts working professionally in the field of management theory believe that it is fundamentally impossible. Our belief is based on the fact that it is clearly determined not only by the subject's of own theoretical work and current problems, but more that management philosophy quickly deploys its own system of functions.

Functions of management philosophy are not a mere formality, but it is a specifically defined type of cognitive ability which guarantees a specific product of theoretical work.

Indirectly through them (i.e. function), management philosophy significantly affects the organization and practical implementation of specific management processes of life, functioning and further development of our society. Due to the high professionalism of local researchers W. Kremen, C. Pazynich, A. Ponomarev, we have suggestions for the system of functions of the philosophy of social management [227, p. 318–323].

There are, however, suggestions for functions of management philosophy from many authors, even lawyers [33, p. 21–22], but we recognize the best offers of these philosophers. In their view, the



unity, the term «system» for some reason is not used, consists of the following elements: philosophical, epistemological, methodological, prognostic, axiological, diagnostic functions.

It is worth noting that the authors identify this set of services for the theory of social management and they do not analyze it for the management of technical and biological systems. Therefore, appreciating the suggestion, we have to add to it for at least a few suggestions that include the specific management of technical and social systems. This is what we will do next, and now it should be emphasized that although every function of management philosophy has its purpose and it is associated with solving of certain specific problems in the theory and practice of social management, all these functions are interrelated and together form a coherent unity.

One of the first in this combination of the following functions in this scheme it should be called an ideological function [227, p. 319]. It takes a special place in the whole structure of management philosophy. The content of this function is to identify and explain from the only scientific view the essence and deep nature of social management, to identify its purpose, the internal structure and fundamental laws, and to identify the relationship of management with key purport values, aspirations and interests of the individual, social groups and society as a whole.

Epistemological function of philosophy is the ability to manage knowledge and learning of the content and nature of the relationship between subject and object of social management in the process of implementation, to provide new knowledge about human society and the process of its operation, the logic and patterns of change and development of them due to special features of the development of objectives, content and nature of management [227, p. 320].

One of the most important and highly responsible roles is imposed on methodological function of management philosophy. It is possible to directly use the principles and requirements arising from the laws of self-organization of society and each of its



respective structural or functional subsystems, laws and categories of management philosophy for effective solutions of complex problems in the theory and practice of social systems [227, p. 320].

Predictive function of management philosophy is inextricably linked to its ideological function. It consists of identifying opportunities, prospects and trends in society, in scientific forecasting and predicting of trends and the nature of the evolution of its political, economic, social, spiritual, scientific, cultural, educational and other fields [227, p. 320–321].

Carrying out its axiological function it enables management philosophy to take into consideration the results of philosophical analysis of the phenomenon of management and maintenance of management activities in a particular social system for forming a kind of hierarchy of values and norms of communication, corporate culture and other factors with the help of which a person can evaluate events, phenomena, behavior and general behavior (his and others) as from the standpoint of the meaning of life, life values and orientations, as from the standpoint of moral and ethical paradigm of a social system [227, p. 321].

Since the primary goal of social systems is to achieve predetermined objectives facing each respective system, the basic methodological principle that underlies the choice of architecture as a management system and the implementation of management practices should be target approach. Therefore, the overall structure of the set of management functions should provide diagnostics of the social system and the nature of its operation [227, p. 322–323].

Our conclusion about the substantive uniformity of technical, biological and social systems brings us to the idea of the need to justify the philosophical principles of management, which is conceptual foundation, along with the ideological, methodological, theoretical factors in the development of the general theory of management. Philosopher constitutes new organizational reality in mind, creates a new world of personality, who has attributive



property to change direction not only of its thoughts, thinking and behavior, but also the direction of the system he runs.

We consider management as a generic term that is defined by cybernetic science: social management – as a species phenomenon. Management of technical and biological systems is also a specific structure. We mean that the management of technical systems today is more and more reasoned and androids appearance indicates good prospects for their intensive movement to full mastering of functions of management.

For its part, management of biological systems affects only the superficial level of mastery of administrative relations but the prospect opens with the penetration into the depth of biological body that «works» on different principles [374] based on a mind activity [236] (L. Krushynska) and generates specific reflexive management. Here it is the same picture as in social management. Research of management principles in living systems in biology and medicine should be based on a probabilistic methodology [480].

Social management as an integrated social system is a conscious, purposeful influence on the social system as a whole or its individual elements on the basis of objective typical system patterns and trends. From the operational point of view, social management is characterized by: 1) objectives, 2) principles, and 3) functions 4) methods, 5) structure, 6) the process of social management 7) the mechanism of social management.

In a narrow sense the «management» means unity: 1) subject of management (head), 2) object management (management system, which may, but is not required to match one of the ideas of socio system), 3) the device management, organized hierarchically, network method 4) control method 5) the political system that ensures the reproduction process of management through co-optation of elements of the management system in the management loop, including the role of an effective manager [227, p. 144–145].

According to the management in the «broad» and «narrow» sense there is understanding of management philosophy in the

«broad» and «narrow» sense. Management philosophy in the broadest sense should be regarded as a special branch of general philosophy of science, an integral part of social philosophy, which is the subject matter of the nature, content and most general laws and patterns of management as an extremely complex social phenomenon and powerful system tools to ensure efficient operation and development any system, including the general public, on clear philosophical and methodological principles. The combination of management of nature equipment and facilities such as a group of people, community and society is contradictory essence of the phenomenon of management. To understand this phenomenon is not enough to say that the management of the society is different from the processes of self-regulation and self-organizing in nature.

Management philosophy in the narrow sense, or management philosophy of specific social system (enterprise, organization or firm) should be considered as a coherent set of interrelated principles, norms and traditions that underpin the corporate culture of the organization or company and the nature of dialogue and debate issues and prospects, as well as forming of the psychological climate, system of interpersonal communication and preferred leadership style.

So, we have come to that point of study when you have to consider the author's understanding of the philosophical foundations of the theory of the formation of management of technical, biological and social systems. Effective structure of philosophical filters for analysis of social systems is implemented in the textbook for higher schools of Ukraine by V. Kremen, C. Pazynich and Ponomarev [227]. This structure includes assessment of: a) ontology of management, b) epistemology of management, c) logic of management d) axiology of management, d) ethics of management, g) management methodology and f) ideology of management. However, it does not satisfy us, as the authors have used it only for social management [227, p. 11–14].



Therefore, we supplemented the list by three functions more. In our view, to explore philosophical problems of management in cyberspace sense of unity to this function one should add two groups of elements: a) for technical systems – modeling, b) for biological, to which we refer the person as biosocial system – education and bringing up.

The system of functions must be closed by a certain criterion or several criteria that guarantee their integrity and performance. For us it is the case with multi-criteria assessment of the quality management of the system: on the one hand, this criterion is the individual manager who should have full range of knowledge, skills and competence of organizational performance in all three areas: technical, biological and social, on the other hand it is a social whole, formed by technical, biological and social bodies, and it is observed by us through the environmental problems the world community.

Summing considered above, let us make the following conclusions for our research: cognitive understanding of philosophical principles involves the construction of an ideal object, which is objectified as an object of study, with the need to ensure consistency of thinking to meet the challenges of time to explain the observed facts, to realize their own values, consider the views of other philosophers, scientists, practitioners, i.e. use a dispositif – «organismic» idea to integrate the philosophical analysis of all three discourses: management of technical, biological and social systems.

And, finally, management philosophy as a reflective process generates relevant products which are expected, as they serve as cognitive principles of forming the general theory of management of technical, biological and social systems. We believe that for us in this study, the most important of these are: the nature of management philosophy that ensures adequate perception of management relations to their nature and purpose and ideology of the study of the subject field.

2.2. Cognitive factors in the formation of general management theory: genesis, nature, organizational consciousness, philosophy and culture

The aim of this unit is to explain on the basis of heuristic potential of management philosophy genesis, nature and philosophy of analytical work that could further build ideological and methodological research algorithms of philosophical research principles of management of technical, biological and social systems as a whole.

The first thing that management philosophy should provide is to explain the genesis of management as a social phenomenon, as it is the product of purposeful human activity or organizational groups of people. Note that the «Encyclopedic Dictionary» states that «Genesis – (genesis) – the origin, emergence, in the broadest sense is the onset and further development, leading to a condition, type, the phenomenon» [117].

On the basis of the scientific literature, we can conclude that «organizational and management activity is primarily the activity over the activity in which the» top «system through knowledge, and thus, by understanding, reflection and thinking of all – covers and assimilates» lower «activity» [389, p. 287]. This means that management as a social phenomenon appeared as a result of the social division of labor in which the top is the separation of organizational activities. Therefore by origin the management is a specific type of human activities and management products are the result of this activity.

Management ontologically changes the natural self-regulation where and when preference is given to information signal [218, p. 92]. However, implementation of this condition could occur only with the structural transformation of information into action – the



criteria are not only attribute, but the concept of functional information. The main premise of this transition was apparently organized by the appearance of a simple functional integrated system (hyper-cycle), which reversed the substantial performance – the source of each structural actions – sets the practical relation of correspondence between reflected and reflected structures. Moreover, in the absence of sufficient compliance, the holistic system of self-regulation is simply not formed, and in serious violation it is destroyed. This is the care of natural selection. And only when actual compliance of cyclical interactions is not dropped after the first cycle, it continues until such time as its components «estimate» structural matching that is installed in them as sufficient. Thus, the ratio of reflected correspondence between structure and its reflected side becomes in the material system palpable attitude that has, by the words of Marx, «the nature of the process» [271, p. 29].

For service of management activities across the country is established a special infrastructure such as analytical centers, divisions of software provision for managerial institutions, consulting firms, educational institutions of management, training institutes, training and retraining centers of management as well as training courses for senior management, where training course can cost tens of thousands of dollars.

Management had emerged from the social division of labor, and it was only the first step, and then there is the division of labor within the organization. Even if two people are working together to achieve a common goal, they must divide the work among themselves. Activity to coordinate the work of others in the broad sense is the essence of management of organization.

The distribution of the total work of its components is called the horizontal division of labor. The result of this division of labor is the formation of separate parts of the organization (departments, shops, industries, sectors, etc.). Since the work of the organization is distributed between individual units and performers, someone has to



coordinate their activities. Consequently, there is an objective need for the so-called vertical division of labor that is to coordinate the work of departments and individual performers in units.

Like any other kind of management, social management is systemic in nature and is part of social management systems. The factors which determine these systems include:

1) unity of a system in respect of its environment and diversity of relations with it;

2) presence of relatively independent system components constituting its managing and managed subsystems;

3) integration of system components resulting in the whole (system) with the properties other than characteristics of the individual components of the system, i.e. the presence of integrative qualities;

4) presence of contradictions within the system, which is the driving force of self-development, raises the need for self-government, targeting one subsystem (managing) to another (managed);

5) historicity of the system, i.e. its development over time.

Thus, the need for management objectively results from horizontal and vertical division of labor within the organization. Since the division of labor is a common characteristic of any organization, any organization requires management. Thus, management is a social need of the social whole – the collective life of the planetary community. It organizes corporate training of junior management staff personnel and launching the exchange of experience, training and so on. Similar processes are present in every country and in the international space. And at this stage the process is global.

The need for people in cooperation, joint ventures, joint work objectively creates the need for management. However, this need always arises where there are any options for joint activity. Management in this situation is the of joint activity – a condition of its normal functioning.



Society as a whole is the result of joint activities of people and their cooperation. Moreover, in this sense the society is the highest form of common human labor, and management is an attribute of social life.

Based on the above, we define essential, in our view, of social management:

1) social management is always available wherever there is a common human activity;

2) The main purpose of government is regulating impact on the behavior of joint activities;

3) The functions of social management (coordination, coordination, planning, monitoring, surveillance, coercion) are implemented in the framework of social relations;

4) as a result of social and management impacts, arise administrative relations, which are, in the first place, relations of the community type, and secondly, volitional relations;

5) social management is a kind of human activity.

Based on these features one can formulate the definition of social management. Social management is a kind of volitional activity, expressed in targeting and organizing influence exercised to ensure consistency and regularity of joint actions of people and groups in the interest of the efficient solution of problems they faced.

Detection of genesis is fundamental to understanding the nature of organizational activities and structures and technologies. It's already the next step in the study of philosophical principles of forming the general theory of management. Management philosophy is to explain the nature of management. To clarify it, we turn to the meaning of management, which is to use the power to organize the process of organizational interaction when it comes to social systems, and, more broadly, in social interaction, when it comes to technical and biological systems.

The following elements that should be explained by the management philosophy are the origin and destination of the

spiritual production, which are in two forms: a) subjective form is in the structure of personality and b) objective form is the structure of society. It is clear that it is primarily about organizational awareness, organizational memory, organizational philosophy and organizational culture. The new era requires management philosophy explaining the conditions under which management occurs. A lot of them depend on the availability and maturity of the so-called functional identity: attitude, outlook, perception and understanding, or integrative product – personal world view. Of course, on the one hand, all organs of the human body are involved in their operation; on the other hand, it is society.

Management philosophy has to explain in-depth source of organizing human activity – organizational consciousness. Any activity, including management, is driven by its conscience. If «the process of spiritual production forms not just the consciousness (it is produced by all individuals who spontaneously are incorporated into the material process), but its special public – «secondary», ideological «form through which individuals» are integrated into the social system», then in the third nature produced by organizational activities, specific consciousness arises, so-called «organizational consciousness» [460, p. 142]. It is distinctly analytical.

Organizational consciousness of humanity is accumulated by peoples of the world for many centuries through culture world view in the center of which are the ideas and principles that are universal, have universal value and significance. The purpose of philosophy is also to investigate the root causes, the essential basis of the world order, to find the deeper meaning of what is happening with the world, society, culture and human. Philosophy aims to fearlessly dive into the secret, dark labyrinths of being in the focus of its contradictions and acquire knowledge produced by it, create universal explanatory model of being a whole and its individual elements, such as the general theory of management.

Organizational consciousness, as an object of philosophical analysis has been lost from the sight of specialists in management



and it is little studied. It should not be confused with market consciousness. It has exactly the opposite elements and forms a different structure of thought, another mental configuration than the market consciousness [31].

Within the theoretical considerations and in the everyday consciousness of the organization and the market there are two opposite types of structuring ideas and values. The logic of the individual can usually belong to either the organizational consciousness (typical example – career climber) or market (speculator or a typical proprietor). Throughout history, these two types of consciousness actively fought each other. A new phase of struggle began with the era of economic globalization and expressed in clear predominance of market awareness.

Management philosophy is to clarify the nature of management inherent in managing technical, biological and social systems. One has to do it, with more or less formulated essence of the phenomenon for social management which is considered as value-semantic influence on human personality and organizational entities that are generated by it – empire state, regions, industries, firms, after all, family. In general, the essence of any kind of management is the impact of an object to give it a certain condition or mode of being.

There is really a problem, and not so much in giving meaning according to the management of technical and biological systems as an integrative but it is to find meaning and articulate it in a clear and suitable verbal form for use. It is necessary to learn other features of meaning that we have not previously used, and present in its attribute properties.

Management philosophy is designed to reveal the content of management of technical, biological and social systems, defined as not in itself a substrate of social phenomenon, but its internal state, a set of organizational processes that characterize the interaction of elements creating social world – people and their natural formations – among themselves and with the environment, and determine their



correlation, regulation, mutual existence, development and change. Here we have to use the social origin of relationships in technology and find their equivalent in the world of biological systems.

In the social sector which operates social relations it is a kind of foundation for management, manifested in the form of specific social action, i.e. decision-making – the main operation that takes place in the managerial structures of enterprises, institutions and organizations. Operation is a purposeful activity implemented by the manager that is directly related to the algorithm of decision-making process. This is the kind of activity that best describes the behavior of managers and management which are differentiated from other social activity. This management decision is the most effective indicator of managerial skills and abilities, the most significant contribution that each manager can make in a professional organization of any kind.

Forms and types of social management are also products of philosophical reflection. Depending on the areas of public life as an object of management it can be distinguished economic, socio-political or management of the spiritual life of society and its members. The object management can also be a person or a group. Hence, it is possible to single out the process management of one person or group. Thus, the structure was carried out by object composition and it disregarded entity management.

Management system of social development should be explored in its complexity – in its object and subject composition unity. From the standpoint of its object composition, the optimal is a structuring of management according to spheres of public life. According to subject composition, the state and public management can be singled out. The philosophy of management is actively developing a new form of management – state and public [137, 393].

The Constitution of Ukraine (Article 36) stipulates that along with NGOs, there are political parties as a form of association. Separation of political management as a separate component of the management of social development hardly seems appropriate.



According to Article 37 of the Constitution of Ukraine, the activities of the organizational structures of political parties in the executive, the judiciary, public institutions and organizations are not allowed. As for the legislative body, the acquisition of Ukrainian society the features of democratization led to revitalization process of forming blocs of political parties in parliament, which is a public entity. Political will most affects the nature of the legislative body of decisions, but the mechanism of their implementation has a political character and implemented through a system of executive authorities and local self-government [394].

Public management as the management of public associations is organizational in nature and is based on the statutes of associations.

The government is overbearing, organizing, managing, since it is performing all kinds of state activities: legislative, executive and judicial. These kinds of activities reflect the principles of civil government (Article 6 of the Constitution of Ukraine).

State management certain inherent properties:

- is based on the law (Article 8 of the Constitution of Ukraine, which provides rule of law);

- has an active, purposeful character: according to Art. 13 of the Constitution of Ukraine, the state provides social orientation of the economy;

- has a national character that covers all aspects of public relations;

- has executive and administrative, organizing character on the nature of state power, relations between members of society. The latter is regulated by state using the organizing, ordering. Activities of government are conducted on the organizational, legal and governmental, administrative, executive basis;

- the object of management is public relations as a whole, the economy, particularly in the form of its individual components and the economic mechanism;

- implements the requirements of the law by performing law enforcement and legislative activities;



- is reflected in the development of management decisions at different levels of government, its various levels;
- protects the right to property (Article 13 of the Constitution of Ukraine);
- regulates privatization and post-privatization processes;
- to adjust the structural changes in the economy, it uses indirect economic methods – taxes, benefits, subsidies, pricing, implementing competition policy, has quotas, licensing, subsidy;
- monitors the activities of non-state entities [394].

Exercise powers: Parliament, the President, the Cabinet and executive authorities, local self-judgment. This gives grounds to expand the definition of social management as such; its purpose is to carry out the executive power through the use of legal mechanisms. The components of state governance are executive and administrative activities.

The essence of state governance is manifested through the exercise of the powers of government. The government has the authoritative character because the implementation of social orientation is possible under condition of availability of power in the bodies performing public administration. In addition, the authoritative nature is the goal of management function, its properties and it appears in some form as governmental institutions. B. Syrenko [407, p. 4] considers, for example, that it is the presence of power, public authority that determines the structure and management methods.

There are some approaches to the sources of power: formal-legal, political, social, and strong-willed. For formal legal approach power is defined as the set of powers with government agencies and officials (J. Wedel). Political authoritativeness is a complex phenomenon where state law allows authorities to form specific powers, but only part of them are more or less accurate prerogatives of state and government agents. Social source of power is generated from its impact on the minds of individuals. Strong-willed approach to determine the source of power is the most common and consists



of a power by the concept of «freedom». The approach was consolidated by defining two principles of state power: law (legality, legalization) and psychosocial (legitimation, i.e. the validity of submissions of population).

Social management, as the whole complex of relations developing in society, is multidimensional and multifaceted phenomenon. Management can be performed by one person as well as a team of people. One can manage the economy, socio-political, spiritual sphere. That is why the study of social management involves representatives of different disciplines: economists, sociologists, philosophers, psychologists and lawyers. They offer different versions of its structure.

From the standpoint of legal science, which is based on the original approach to the structuring of social management one should use the criterion of «priority interests», as the latter is defined as one of the criteria for distinguishing of public and private law.

On this basis, social management is divided into:

- a) the management conducted with the purpose of the public (general) interests or public administration;
- b) management conducted with the purpose of corporate interests and corporate management;
- c) management conducted with the purpose of private interests, whether private management.

Most relief legal companions of these types of social management are: administrative law – for public administration, corporate law – for corporate management, civil law – for private management.

Public administration consists of:

- 1) state governance, which is the subject of the state, through appropriate structures;
- 2) public administration, where the subjects are non- state entities.

It should be noted that in a society organized on the basis of the state, the state has a predominant channel of social and managerial

influence. Now in public life it is hard to find at least one area, which somehow was not affected by managerial impact of the state.

At the same time, in terms of administrative reform and market reforms in the economy, it is increasing of the activities of non-governmental groups and agencies who are increasingly involved in the management of not only public, but also in public affairs, on political, economic and socio-cultural issues.

Government and public administration in their efforts are not opposed to each other. As a kind of public management they have a lot in common. This is due to the unity of public interests, goals and objectives to achieve and solution both systems are active, and also by the very nature of management.

Each of these types of management is characterized by specific features, which preclude their identification. The differences between them are due to the peculiarities of their organization, the nature of the used forms and methods of influence.

Thus, on the basis of the above, it can be argued that the philosophy of management system can provide cognitive principles forming the general theory of management. Firstly, to fill the main philosophical category of «genesis», «nature», «essence», «content», «shape», «organizational awareness», «organizational philosophy», «organizational culture» with qualitatively new meaning, as currently these categories are filled with a specific meaning that is inherent in the management of technical, biological and social systems, and there is no generalized view of their semantic content, from the height of the general theory of management.

Secondly, management philosophy closely monitors the internal world of technical, biological and especially less social systems on the example of corporations and constitutes a new reality, but through standardization of new methods of obtaining knowledge about the world, in other words, establishing anew in thinking. No less significantly, by doing all this, philosophy answers the persistent challenges, but replies, so to speak, in a special way. This



implies that the constituting a new reality, responding to challenges, philosopher realizes himself, enters into a dialogue with their teachers and other thinkers, holds his own vision of reality and understanding of the issues. Creating a new reality, philosopher discusses and defines the essence of the phenomenon of interest to him. If to relate all these requirements to the idea of control, that is how the subject of philosophy of management may look like.

Thirdly, the philosophy of management penetrates into the essence of changes of globalization, and it conceptualizes the sense of the concept «condition» in nonlinear light; it is capable of tracing the alteration of these conditions through differential estimation in the plane of control over technical, biological and social systems, and also in a horizon of transition from technogenic toward the informational era of the community development worldwide.

Fourthly, it has demonstrated the necessity and shift of the sense in the change of leading principles of social development in which we recognize some tendencies of a planetary level, namely: a) the world community has brought the inwardness of technical and social systems to completeness; and consequently they require the change of forms of living, or being; b) due to activization of noosphere coming out in a form of informational revolution, informatization and internetization of social life with the involvement of technical and biological factors, social systems as progressing field form of life have thrived and determine a process of globalization of morphological structure of control system, and demand innovative character of its functioning; c) environment has already filled with technics and social systems to such degree that they have started to squeeze out the biological systems from vital space, even real threats to planetary biota's life have become apparent; d) the urgent need to harmonize theoretically and practically the control by means of organizational interaction of technical, biological and social systems in dispositive of organism ideas has arisen.

2.3. Ideology and world view-methodological prism of the analysis of a philosophical discourse of control over technical, biological and social systems

The task of this subsection is to consider logic and ideology of the analysis of a philosophical discourse of control over technical, biological and social systems for the purpose of establishing generally acceptable denominator for their integration into a uniform direction of research, comparison, and funneling within a framework of the general theory of control. What is the essence of this mutual understanding that is «a measure of true social communication»? [64, p. 185]. According to O. Bogdanov's definition, it consists in «common language, and in the sum of concepts it expresses, in what is called general «culture», or, more precisely, ideology» [64, p. 186].

At first we will give the author's opinion in relation to ideology as means of research of organizational processes. Elaboration of ideology of this research, as well as the world outlook choice, is entirely a private affair of the researcher. If to leave ideology definition as a system of «opinions and ideas through which people's relation to reality, to one another, to social problems and conflicts are realized and estimated, and which also contains the purposes (programs) of social activity aiming at consolidation or alteration (development) of given public relations» [488, p. 206], then under ideology of this research, it is necessary to consider the set of ideas (semantic filters) which we are intending to use as a basis for reconsideration of a control over technical, biological and social systems for the purpose of their reduction to a genitive denominator.

We value O. Bogdanov's view at heuristic possibilities of ideology in the area of formation of general organizational science. He wrote on this matter: «... the organizational point of view



imposes the necessity to set also new scientific questions, which modern special sciences are not able to outline, define, and furthermore solve.

Apparently, the organizational point of view should be closest to biological and public sciences which interpret organisms and the organizations. However, it is found there in far unconscious state, and its application within this area is incomplete and not systematical. Therefore in many cases its mere resolute or clear application to a problem is enough to receive at once the new illumination of known facts, and in due course new conclusions, which sometimes deeply differ from the former decisions.

Thus, for example, the entire immense issue on ideologies, that is on forms of language, thinking, rights, morals and etc., issues which cover a vast sphere of social sciences, was usually analyzed apart from the idea of social organization as a single whole, the constituents of which are connected by necessary vital nexus.

Marxism was the first to recognize this nexus, though only partially, its one side – the dependence of ideology on manufacture relations as secondary forms or derivative of principle forms. It has left open the issue concerning the objective role of ideology in a society, its essential social function: within an organized system each part or aspect supplements other parts or aspects, and in this sense it is significant for them as the organ of a single whole which has special purpose.

In certain cases Marxism approached such problem by means of establishing that a particular ideology serves interests of a particular class, fixes conditions of its domination or is its weapon in a struggle against other classes. But it did not raise the issue in general, and for many important instances, it adopted without criticism old, pre-scientific formulations; for example, it considered art to be a simple ornament of life, mathematical and natural sciences to be extra class sciences, the higher scientific truths – to be pure, independent of public relations. The organizational conception has at once changed these concepts, it has discharged



their diversity and ambiguousness, specified the valid and necessary place of ideology in the life of a society. These are the organizing forms for the entire practice of a society, or its organizational tools. In their development they are really defined by conditions and manufacture relations, but not only as their superstructures, but as the forms organizing certain maintenance; they are defined by this maintenance, and adapt to it. The entire ideological aspect of life is represented in new light, and variety of its riddles is explained rather easily» [64, pp. 134–135].

So, we should begin with the main thing – the search of constructive ideology on the basis of the new world outlook approach to understanding unity of the world we live in. Unified whole of the world has own logic, structural and functional principles, and it cannot be reduced neither to economy, nor to culture, to the international relations or world politics. Beside the ontological level, it simultaneously acts also at the consciousness level. Deepening in consciousness is a distinctive sign of any social system, in particular of the worldwide one. The consciousness not only influences the practice, but also, due to the mechanism of interpretation of reality, it functions as the intermediary in the influence that causes environment and social structures. Revealing itself ontologically in a course of globalization and in a world order, at consciousness level, unified whole of the world is realized in the form of global or planetary consciousness.

Unified whole of the world is the social reality. Philosophy has developed two approaches in interpretation of construction of reality – monism (Parmenid, Spinoza) and pluralism (Leibniz). Monism represents a reality as continuous, merged whole, and within its framework, its diversity appears as deceptive visibility; however, even such view means impossibility of categorical objection of plurality of cultural-civilization forms. On the contrary, the pluralism shatters a reality into infinite set of the independent, isolated, closed carriers («monad»). Thus, a modern administrator in choosing own view at the social world, should decide between monism and pluralism.



Recognizing the fact of transition from the technocratic type of development towards the information type, there is reasonable to place the stake on noospheric, and, probably, even on the space-type ideology. The ideology oriented towards the organism order of the social world is promising. Here it is still necessary to decode O. Bogdanov's thesis that «an organism, an organization has its own «purpose «and» is arranged according to it» [64, p. 113].

On the horizon of our analytical work, ideologemes of East philosophy about organic unity of the world and a place of the person in the Universe stand out. Thus, the reality of social life consists in presenting a complete social organism [See: 113, p. 561]. In the previous subsections we already paid attention to this fact, and positively evaluated heuristic potential of organism ideology for the purpose of realization of an overall objective of our research. In fact, Eastern philosophical thought has come nearer to understanding of ideology of the planetary order, than the Western one.

F. Shelling had healthy judgment on the issue, he wrote: «The organism is not a way of a material substance which is constantly changing; it is an organism only by its look or by the form of the material life. Life depends on the substance form, in other words, the form has become essential for life. Therefore, the purpose of activity of an organism is not direct preservation of the substance, but the substance preservation in that form in which it is the form of existence of higher potentiality. The organism is called so, because, contrary to original belief, it exists not for itself, there is merely a tool within it, the body of the higher» [525, p. 482].

As it is known, the level of scientific character of any ideology is defined by its connection with a type of a civilization which defines the main life tendencies of the planetary mankind. There is little harm in failing to provide the exhaustive solution to the problem. The shift in thinking of philosophers and scientists who determine the character and organization of spiritual manufacture of an epoch is of great value. Others will go further, will put some guts into it, and will achieve greater things.

However, at first, it is necessary to identify the essence of an ideology as the knowledge tool, as well as the transformation of social lives. «Marx' mode of analysis, – as M. Mamardashvili rightly points out, – assumes that ideological manufacture is always the rationalization of ready spiritual products of the public relation (that is products set outside, and irrespective of activity of rational scientific thought) by external means of «knowledge», use of rational procedures as means of cognition and appropriation of these products by individuals, which in such a way are integrated into a public system. But if these means are «rational in a bourgeois society (that is they are always inverse to the ability of judgment anatomized individuals), then during other historical epochs these means can function as means of animistic, mythological, religious and other systems» [268, p. 33–34].

Such definition of ideology of research follows from the fact that we consider the controlling function of the ideological relations to be involved in a sphere of spiritual manufacture, as similar to those which is carried out by economic relations in the sphere of production of goods.

In the available literature this thought has already been fixed. In particular, O. Bogdanov, underlining the organizing principle of ideologies and defining their place in the society life, wrote the following: «There are organizational forms for all practice of a society, or that is to say, its organizational tools. In the development, they really are defined by conditions and manufacture relations (spiritual, in particular – Yu. B.) but not only as their superstructures, but as the forms organizing certain maintenance, that are defined by this maintenance, and adapt to it» [64, p. 135].

In the collective monograph «Spiritual Manufacture», the following acknowledgement of our thesis on an organizing role of ideology in research is found: «In the course of spiritual manufacture not simple consciousness is formed (it is made by all individuals who are spontaneously included in the material process), but its special public – «secondary», «ideologized»- form due to



which individuals» are integrated into a public system» [460, p. 142].

It is clear that in our case, it is not necessary to dwell in detail on the role of ideology in organization of the mental activity of the researcher as it complies with all the laws described by K. Marx in his «German Ideology», with that only little distinction, that a subject presents itself not as all practically-reformative activity of the person, but as specific philosophical thinking in regard to the problems of control over technical, biological and social systems, that is the entire social development of planetary community.

The basic function of ideology of research consists in being the original semantic filter through which should be filtered all riches of the ideas, collected by the early XXI century by world philosophical thought on the problems of the organization planetary life of people, and to select general that at the same time is inherent distinctiveness of the specific forms of control.

V. Nalimov rightly points out this aspect of learning: «Development of culture, in certain sciences, is besides infinite filtering of new ideas through paradigmatic representations which are generated by senses of the past. If filters fail to progress towards the forms which soften their rigidity, the revolutionary rejection of them takes place. In the history of the western Christianity it is religious and ideological wars and revolutions, in science it is a revolutionary change of paradigms described skillfully by Kuhn» [See: 316, p. 42].

So, as it is not the initial maintenance of the social world but the filter through which it is analyzed that changes in the course of knowledge deepening, to obtain its organism image, it is necessary to apply to it qualitatively different ideological installation. Thus, the organism view of the social world is no more, than one of possible.

The more striking difference the more contrast results. On this basis sometimes in certain instances the texts produced by the scientists studying the same processes seem incomparable. For



example, it is true in the case of scientific and theological knowledge of the world. In addition, the idea playing the role of a semantic filter and acting as the gnoseological toolkit of research obtains new quality; therefore it should be called nothing but *ideologema*.

Proceeding from all stated above, it is reasonable to consider ideology as the phenomenon which organizes not only everyday but also scientific consciousness. There is nothing new about this, as it is an issue of methodological function of ideology. Therefore the ideology as research toolkit is, in our opinion, an effective means of rationalization of already ready spiritual products which function in the form of philosophical ideas, in which in the ideal form real public relations between people and phenomena is fixed.

It is possible to say that in the course of research we should transform the real social phenomenon of life, because it makes a crush on people and they experience it is in the form of the knowledge. «Relations – wrote K. Marx and F. Engels in «German ideology», – become in jurisprudence, the politician and etc. – in consciousness – the concepts» [See: 275, p. 100].

In other words, in the course of research it is necessary to recreate in the ideal form certain a system of real-life public relation in the horizon of organizational consciousness, and to find means to integrate them in consistent integrity. K. Marx and F. Engels directly specify that idea as the product of activity of the philosopher is only imagery «equivalent» of the real relation. «The philosophers equal relations and ideas. They know only the relation of «persons» to themselves, and consequently all real relations become ideas for them» [13, 99]. Moreover, even more accurate definition of what «the philosophers call the idea» follows [13, 99].

It means that during the philosophical analysis of control over technical, biological and social systems, we have to operate with corresponding concepts or ideas, and in the theory of the general management, for reproduction of adequate processes, researchers should use the term «relation», for example, «object-objective»,



«subject-objective» or «subject-subject». Thus, if the philosophy of management studies principles of formation of organizational outlook, consciousnesses, ideologies and cultures, their intrinsic characteristics, then the general theory of management studies actual variety of sphere of control, its historically rapid forms and concrete means of organizational interaction; that is the science of management creates, systematizes and extends knowledge of how to carry out administrative activity.

For this purpose, we will consistently convey, and pass through a prism of cognitive analysis the maintenance of discourses of control over technical, biological and social systems, as all of them together create the ontological bases of organizational interaction, and their ability to live is realized in integrated organism form, which inherent in exclusively live and clever live substance, even if it is aloof (for example, technics) from its creator.

Diversity of meanings of the concept «a discourse of control over technical, biological and social systems» in theories, and different forms of practical use of a phenomenon of control in such opposite spheres as technics, the biology and society, demand the authentic methodology, capable not only of fixing different contexts, but of generalizing, ordering, comparing them and, eventually, reducing them in a consistent system.

So, not to get confused in a host of ideas, concepts and other attributes of a semantic field, we will analyze the discourses named above, to control some main elements, namely: a) presence of a specific body of corresponding sphere; b) language, as a carrier of processes which are realized in it, and consequently it bears their maintenance; c) signs of organizational unity of elements in sphere – (a techno – bio – socio-) genes and purposeful process their self-expansion – (a techno – bio – socio-) genesis. We will notice that genesis – from Greek genesis – an origin, occurrence, is a part of compound word which means: connected with a formation process, occurrence (for example, phylogenesis) [117], cenosis – from Greek. Koinos – in common, together, the general concept for the

interconnected groupings of organisms, irrespective of their size [510].

It is necessary, to be able to deepen further the cognitive analysis and to have possibility to differentiate elements of administrative paradigms in corresponding spheres, and to single out the constituents of the compound philosophical analysis: a) genesis, the nature, essence, the maintenance, the form of elements of control over each of the three above-named spheres that are reflected by language of paradigms and concepts; b) to formalize and present morphology of their control systems; c) to characterize parameters of functioning and development of a phenomenon of control in each separate segment; d) to render inherent in every sphere «its own» dominating outlook and ideology of managers.

That is we have to analyze discourses of control over technical, biological and social systems according to the following algorithm:

— analysis of philosophical principles of the nature, essence, the maintenance, forms, and also outlooks and cultures, categorical apparatus of the control concepts;

— reflex ion of the morphology of control systems;

— characteristic of functioning and development of a phenomenon of control;

— to render the inherent in specific sphere theoretical formalization of the practice of control, and managers' behavior.

It will give the chance to us in due course, surely at the final research stage, to formalize in control over technical, biological and social systems the identity, special, general and universal, whereby to lay down the philosophical basis (unlike methodological, ecological, theoretical) of the development of general theory of management.

So, the discourse of control over social systems has appeared most dispersed and multi-colored. Administrative activity at this level is not coordinated and theoretically is not proved. The philosophy has failed to provide sense to everyday life of peoples around the world. Therefore it is not surprising that the traditional



European science did not recognize the problem of purpose. The Universe, as well as its separate processes, were supposed to have no purpose. Such point of view did not cause any logic difficulties, and all judgments concerning the purpose were easily assigned to the problems of theology. But for cybernetics such approach was not satisfying. How is it possible to discuss an issue on control over any system, and what can be said about an optimality of any strategy, if the purpose of a system development is not formulated?

It is possible, however, to assert that the purpose does appear in a process of the system development. However, it is not always a simple thing to cope with the problem of this kind. Let's say, how to elaborate the concept of the purpose for large systems such as the state, which requires conscious government, and besides, the government should be to some extent optimum? This problem is well elaborated in D. Prays' work – the American expert in problems of the government who served as the adviser to three presidents [566]. Formulation of the purposes, – he confirmed, – is a main difficulty in the scientific organization of government. They can be easily formulated for the lowest links of a system – separate firms or small military subsections, but how to formulate them for the state as a whole? [316, p. 19].

So, we have consistently analyzed the condition and direction of the development of each of three types of control, and we have come to the unflattering conclusion that ideologically they are not coordinated, and even resist each other. If preservation of these ideological directives is continued, to integrate their further development into a uniform channel will be conceptually impossible. Therefore, it is necessary to deepen the analysis of philosophical principles of formation of the general theory of control.

Thus, proceeding from above-stated, the ideology of research can be defined as a specially designed system of semantic filters-ideologemes which will organize our research activity in the course of mastering of an organizational matrix of the world community



through a prism of organism ideas. Within a framework of this context, the spiritual manufacture we interpret in a broad sense, as «all activity of people such as manufacture, exchange, distribution and consumption of cultural wealth» [66, p. 209].

Substantiating our own conceptual approach to studying the process of formation of the general theory of control, we can underline that philosophy of management: first, assumes studying the organizational interaction at the most abstract level, as a particular concept which takes place in conceptualization of its every version, namely: control over technical, biological and social systems; and secondly, it examines these versions of control separately in all their variety and specificity, as it comprises all necessary for realization of this purpose approaches and knowledge tools.

Thereby, in training the managers «Philosophy of management as the branch of scientific knowledge and discipline, has every reason to ensure the formation of necessary universal and professional competences, the set of which can signify the presence of corresponding outlook, methodology of scientific knowledge, ideology of development of organizational interaction and organizational culture.

Thus, the ideology of research of a phenomenon of control consists:

- At the first stage – in creation of the general concept of the study of control;

- At the second stage – three particular versions of control under the following scheme are investigated: a) the ideology of control, b) philosophical parameters of the phenomenon, c) control system morphology, d) control system functioning, e) removal of the social organism of the country in the system of self-control (in dispositive), e) theoretical formalization of administrative activity;

- At the third stage – according to the scheme given above, the comparative analysis is conducted;

- At the fourth stage – conclusions concerning tendencies and laws are drawn: tendencies which are observed in a world outlook,



morphological, functional and theoretical plane of each kind of control; laws which penetrate each cut of the phenomenon under investigation. The following directives are ranked among the dominating ideologemes:

- dispositive should be the organism idea of objective reality of control at cultivation of which the control over technical, biological and social systems will be considered as the bodies of the unified whole – a planet organism;

- cognitive analysis of the main philosophical categories: genesis, the nature, essence, the maintenance, the form, organizational consciousness, outlook, culture and ideology;

- morphological analysis of a condition of structures of control over technical, biological and social systems;

- functional analysis of the possibilities of systems of control over technical, biological and social development;

- relation to system of self-control of a planetary social organism;

- analysis of theoretical reproduction of control over technical, biological and social systems in the scientific inheritance.

The comparative analysis of condition of three control systems over technical, biological and social systems, and arriving at a solution concerning the final conceptualization of scrutinized through research material should be the end of the analytical work.

Conclusions to the second chapter

Despite of heterogeneity of views on its subject, principles and research methods, the philosophy of management as a young science has been going through the stage of intensive formation. As the analysis has proven, the most positive results in the area of

formalization of its subject were obtained by the Ukrainian scientists.

In the structure of a subject of philosophy of management we include: a) ontology of management, b) gnoseology of management, c) logic of management, d) axiology of management, e) ethics of management, f) management methodology, g) management ideology, h) management staff and the personnel of the organizations. The dominating functions of philosophy of management are formalized. Among them: world outlook, gnoseological, methodological, prognostic, axiological, diagnostic, modeling; training, education.

On the basis of employment of the toolkit that belongs to philosophy of management, it is proved that administrative activity is the «activity over activity», that is it has organizational character and is attributive public necessity. Its provision is generally accepted and obligatory in all spheres of life of the person. We have proved that: first, a source of the phenomena and systems of control over technical, biological and social systems is the person, and a substance – human activity; secondly, ontologically there are three versions of control systems – modification of the generic phenomenon – organizational interaction of the control subjects and their products that are substantivized or subjectified in a structure of the person, and objectified in a form of environment; thirdly, functionally they are served by the same stream of the administrative information which circulates in a space of social interaction; fourthly, control systems have the same characteristics: world outlook, ideological, morphological, functional, and they are also «removed» in a self-control system of dispositive – a social organism of a planet, the country, and a particular system. Generic differences of each control system «are removed» accordingly by dispositive of a technical body, a biological body or an organism and a social body.

Connection between a social institute of the power and a control system is established. The semantic nature of control is underlined.



It is recognized that the philosophy is capable of opening deep sources of administrative activity, namely: organizational consciousness and its properties. The characteristic of its historical segment which accumulates the knowledge about stages of self-expansion of social control is presented, and also such base concepts as «self-organizing», «control» and «the control» are distinguished, the multidimensionality of the approaches to studying a phenomenon of control is evaluated.

It is proved that the organizational outlook of the person is the universal tool of comprehension of a new state of social development, according to the principle of persistent instability, and due to organizational culture, it is capable of changing a development vector with the assistance of nonlinear thinking and innovative behavior. Three constant conditions for technical, biological and social systems are theoretically proved: a homeostasis, homeorhesis and homeoclas, also gravitations of each type of system to the constant mode is defined.

On the basis of ideological narrative, the system analysis of discourses of control over technical, biological and social systems, according four parameters, is conducted, namely: according to categorial device of concepts of control; according to reflexion of morphology of control systems; according to character of functioning and development of a phenomenon of control; according to dominating outlook inherent in specific sphere and ideology of managers' behavior.

The general conclusion is negative, because being products of activity of the person, subsystems possess own logic and ideology of self-expansion and not open to collaboration, and resist one other. At the same time in structure of a whole – a social organism of a planet- they have to serve one other.

For deepening of the analysis of specific subsystems of management, the complex of leading ideologemes was formed, due to it, for the purpose of philosophical generalization and ordering of



their properties according to algorithm: general, the general, special and individual, their main characteristics should be formalized.

The following directives are included to leading ideologemes: a) organismic idea of objective reality of control with cultivation of which the control over technical, biological and social systems will be considered as bodies of integrity – a planet organism – should be dispositive; b) the cognitive analysis of the main philosophical categories should include definitions of: genesis, nature, essence, maintenance, forms, organizational consciousness, outlook, culture and ideology; c) the morphological analysis of a condition of the structures of management over technical, biological and social systems; the functional analysis of possibilities of the systems of control over technical, biological and social development; the relation to a system of self-control of a planetary social organism; the cognitive analysis of theoretical reproduction of practice of control over technical, biological and social systems.

For application of these semantic filters, we have created a universal analytical matrix, and through it we have to «filter» available theoretical material, reflecting the control over technical, biological and social systems. Only under such circumstances, we will have possibility to compare them against each other in a horizontal plane that is according to homogeneous components of organizational process. It is extremely a large amount of analytical work to perform, and consequently, to each of the three kinds of control a separate section of research will be devoted.



CHAPTER 3

COGNITIVE FACTORS OF THE GENERAL THEORY FORMATION IN THE CONTEXT OF TECHNICAL SYSTEMS MANAGEMENT

The task of this chapter is to verify the algorithm of analysis of philosophical principles of the technical systems according to the offered algorithm, namely: the ideology of control, philosophical parameters of the phenomenon, system morphology, control system functioning, character of removal in a system of self-control of a social organism of the country (in dispositive), theoretical formalization of administrative activity. If to describe all three kinds of control by using this algorithm, it means, according to our working hypothesis, that it is possible to generalize accumulated in this way material on a basis of genus-species relation differences between the phenomena. More elaborated analysis of the control over technical systems is presented in the monograph «Philosophical problems of control over complex systems: ideas, principles and models» [54].

3.1. Technocratism as the world view and ideological support of scientific and technological progress of society in a transition period

Let's begin with the analysis of a discourse of the management of the technical systems. This refers to the management of industrial systems (MIS) and automated manufactures, automated enterprises, diversity of the indistinct phenomena and models, the Internet, computer networks, space and military facilities, railways, air communication, nuclear stations, coppers, planes, cars is a question of control of systems. Last samples of uniqueness of such control systems can be the atomic power station, collider, Mars robot «Curiosity» which on August, 6, 2012 successfully landed at the Gale Crater in southern hemisphere of the planet Mars, usual personal computer and domestic Samsung Galaxy S III – company Samsung Electronics communicator with operating system Android, etc. [567].

The condition of technical sphere in a philosophical plane interests us from the point of view of the fact that science and technics powerfully influence all spheres of life. Therefore they determine the particular aspect of interpretation of the set of modern philosophical problems. Expression of Charles Jaspers, one of the XXth century brightest philosophers proves it: «The technics has become the main theme in attempts to learn condition we have been in» [548].

The management ideology of technological systems is a natural product of application of management philosophy of to a technosphere. The world of the technics created by man has appeared so powerful that it has caused, especially at the initial stage, its specific outlook – technocratism. Technocrats consider the following as obvious. The mankind in the course of accumulation of



knowledge and information has created on mother Earth the artificial environment of existence of steady natural phenomena – technogenic processes. Technocrats call this environment the technosphere.

In the beginning of the article «The issue on technology», M. Heidegger underlines that the object of consideration of philosophy of technics is not merely the phenomenon of technics, but the technics essence. Thus, it implies not that technics which is developed, exists and is exposed to criticism, but «possible» one, that is the technics that can satisfy our needs in the nearest or more remote prospect. Since M. Heidegger estimates the existing situation concerning the technics negatively, and also, as he considers this situation to be depended on forms of comprehension of technics, the German philosopher sets as his goal, on the one hand, to block existing forms of thinking of technics, on the other hand, to plan features of new understanding of technics. For example, as far as the tool understanding of technics, M. Heidegger asserts that it is «ominously correct», and that «when we consider the technics as something neutral, we surrender ourselves to its power; it is the present day much accepted understanding of technics, that makes us absolutely blind in relation to the technics essence» [503].

M. Heidegger's other important standpoint is that the modern technics is closely connected not only to natural science, but also extends to metaphysics of New time; the latter, according to M. Heidegger, cultivates the ideas of subjectivity and domination over the world. «Human subjectivity, M. Heidegger points out in his report delivered in 1938 «Time of the picture of the world» reaches in planetary imperialism of technically organized person its highest peak, from which it ascends to a plane of the organized monotony, and settles there. This monotony is the most trustworthy instrument that is the technical power over the Earth» [506, p. 144].

As it is the issue of other nature, we deal, accordingly, not with the natural form in which the first nature is found, but with the form transformed, notably it is transformed two times. The first time the



natural form undergoes changes, when it is reflected in consciousness of the person, and the second time – in public consciousness. Thus, technocratism has two forms: subjectified and objectified. Determination of existence of two kinds of forms of technocratism is principal for our research [48].

So, we are going to scrutinize, step-by-step, the subjectified and objectified technocratism forms. Obviously the first form is inherent in administrative personnel, and the second one is realized through the processes of management of social development, and stiffens in its results. In context of education, it has specificity, as technocratism is inherent both to managers, and a product of their activity – to students who become new carriers of technocratic knowledge. So, in this way not only renovation of technocratism takes place, but also its distortion, as it starts to take «a superfluous» place in life of world community.

To subjectified form of technocratism (technocratism here: the ideology of technocracy = the power of experts in technology – *translator's note*) we include archetypes, ideas, belief, outlook, thinking, knowledge, stereotypes, algorithms, models, etc. Let us consider them more thoroughly, as this phenomenon is made of existence of such small and, at first sight, insignificant forms technocratism.

There are two approaches to the analysis of reality within a framework of the technocratic outlook of modern Western society. The first one is idealistic (dreamy). The technocrat is the original engineer of human souls and public consciousness. This type of the technocrat was characterized by the mass-leveling approach to estimation of public processes. Comprehensive industrialization and introductions of achievements of scientific and technical progress, as panaceas from all social conflicts, as well as the method of construction of an ideal society of the general well-being was the purpose of technocratic outlook.

The second, more modern one is connected with the period of development of industrial revolution – an epoch of an electricity and



mass media. The technocrat at this stage is represented by the ruler of destinies of the states and world. The establishment of a new world order based on well-being of a mass product, the international division of labour, open information and trading space was the purpose of technocratic outlook. This stage of development of industrial revolution has resulted in a psychological break in public consciousness (super oversteering – growth of stresses, drug addiction, criminality and terrorism), a technological break in industrial spacious manufactures – non-uniformity, forcing, the disaster growth (consequences of industrial accidents increase to the dangerous sizes) and an ecological break (deplete resources of the biospheres self-renewal of the planet).

New understanding of technocratism (the St. Petersburg school) is connected with a new stage of industrial revolution – revolutions in processing means, storage and information transfers. The technocrat at a following stage of industrial revolution wants to be a builder of harmony in all spheres, using information power of modern technologies. Creation and support of harmonious balance of forces and consequences of activity of human society, and distribution of power of technogenic civilization for the mother Earth borders becomes the purpose of technocratic outlook. It is idea of technocratic empire. «PAX TEXNOKRATUS» – unity in diversity. Hierarchies of the force are based on intellectual and information power. It is the idea of control over power of forces of the nature for the sake of universe existence in its entire variety.

It is the idea of the Galactic Empire based on unity of the world of a matter, biosphere, a technosphere and a noosphere (mind sphere), and distribution of this harmonious connection on accessible space of universe. Many people consider the relation to the person as to «cog in the machine», was characteristic of a Stalin's power structure, and nowadays such relation is changed. This is a deep illusion. Technocratism – «mechanical» outlook – is an inevitable consequence of an industrial society, irrespective of pattern of ownership and a political mode.

Technocratism as the outlook has arisen as a result of occupying by the technics the advanced positions after a number of considerable victories of natural sciences in XVII-XVIIIth centuries. In the middle of XIXth century its adherents united at a positivism platform (the founder of this philosophy – Ogyust Kont), having proclaimed the requirement to transfer research methods of physics and biology into socio humanitarian disciplines. Since then, technical and economic sciences grounded in quantitative laws have been recognized by positivists and technocrats as useful; however, the humanitarian sciences, including also psychology, they have been treating as secondary ones, because these disciplines use language of qualitative descriptions and do not give any real return.

Marxism as the outlook has fixed and has extended technocratism through ideologeme about a primacy of material manufactures. About this ideologeme's consequences for culture and education formation we know not from written sources, but our own experience.

Another extended subjectified form of technocratism is technocratic mode of thinking, which is oriented towards solution of urgent social-ethical problems, first of all, with the employment of technical means [40]. It forgets the Biblical truth: Render to Caesar the things that are Caesar's, and to God the things that are God's» (which nowadays quite often is supplemented with blasphemous, in particular even for the engineer, construction: «And render to mechanic the things that are mechanics'»). An engineer, who has self-esteem, concentrates on professional problems instead of solving the problems unusual for the nature of engineering work. Adjacent and, moreover, the remote fields of activity involve, as a rule, engineers-losers who has not found themselves in the professional elements and are satisfied with falsity of tinsel of bureaucratic or other similar career. Also they do not understand that time has come to think of the eternal. Isn't in this the true secret of appearance of engineers who constantly «oversteer» in social problems on abrupt turns of history, engineers-bureaucrats, «quasi-engineers» and engineers «for rent».



The most widespread product of subjectified thinking is the ideology technocratism. It has got extreme distribution during XX century and nowadays moves by inertia, though the maintenance of the social world was cardinally updated during advance of the information civilization.

Technocrats consider the following for the obvious. The mankind in the course of accumulation of knowledge and the information has created on mother Earth the artificial environment of existence of steady natural phenomena – technogenic processes. Technocrats term this environment as technosphere. The modern ideology of technocratic thinking is based on the scientific approach to studying the processes which are going along the process of accumulation of the information and technosphere development.

The evolutionary spectrum of concepts of technocracy is shown from the ideology of technocentric thinking of the epoch of industrial revolution and on out to interpretation of claims of experts, and hopes on information resources of computer systems. Based on this, socially-moral aspects of activity of technical and engineering workers are analyzed.

In many countries technocratism has got into all spheres of public life, and it reveals itself in different forms and variants. For example, in sphere of value orientation, H. Skolimovsky underlines a «simple technocratic «approach, which replaces fundamental values of human existence with technical (as equivalent), with the operational advantages and maximisation of «values by means of simple mathematical functions» [412, p. 247]. At the same time conceptually uniform ideology of technocratism continues to exist today in the following basic variants.

The first variant. Nowadays quite often technocracy is identified with «expertocracy». During the antique epoch the sophist Protagor considered (everyone) the person to be a measure of all things (anthropos metron panton). The subjectivistic essence of Protagor's formulas was neutralized by Democrat who proved that not any



person, but the person of knowledge – a wise man is a measure and the judge (expert) of all things. Finally, the mankind has transferred function of the interpreter of a measure of things to the specialist-expert in any area of knowledge. It seemed to be fair for a long period of time. In the middle of XXth century, however, experts faced the situations which made them to consider once learnt highly specialized and professional methods and estimations. They have become the carriers of one-sided approaches to solutions of important social and technical problems.

The drastic situations take place. In 2000 an engineer, the leading expert of the design bureau «Ruby», instead of the complex professional analysis of the accident on the nuclear submarine «Kursk», spoke about inexpediency of lifting of the sunken boat: «... I as an engineer say to you that we have lost everyone in the «Kursk», and it is not necessary to spend in vain the state money for works on its lifting». He has aggressively shown a technocratic position. The representative of DB «Ruby» did not think that it was professionally necessary to explain to the tax bearers why they – the design engineers – had not provided (that the President of Russia V. Putin recognized later) in the project of the nuclear submarine the reserves of survival corresponding to the submarine goals, and had not calculated real spectrum of extraordinary non-planned situations, for neutralization of which the effective means of their liquidation, and emergency evacuation of crew which has got into accident, they had been obliged to design. The ambitious engineer, on the contrary, has taken not natural to him position of the official – the dictator from economy.

Association of civil and professional responsibility demands to involve into the dialogue during which critical professional and social decisions are made except experts also representatives of other areas of knowledge, in particular, experts from social studies, social philosophy, ethics, jurisprudence, psychology, ecology. But this is also not enough. Even all of them together cannot change the democratic decision of citizens – the tax bearers.



The latter, of course, should consider the opinion of technical specialists – experts. To consider does not imply to trust blindly their thought or the means they use to make decisions of this kind. In this context, doubtful are attempts to induce the multistage computer programs with the expert functions; in particular if they are made responsible for starting the thermonuclear tipped rockets. Anyway, we – citizens – «are given no other alternative but to take responsibility and risk for regulating reasonably the progress», – the German philosopher Hans Lenk writes in his work «Reflections on the Modern Technics» [248, p. 175]. Hans Jonas, another representative of German philosophy of technics, suggests to use as a guide an original categorical imperative of engineering ethics of the future: «Act so that the effects of your action be compatible with the permanence of genuine human life on the Earth» [509, p. 406].

The second variant. Technocrats are people who have come to take up the technocentric position. They advocate the supremacy of a technical way of solution of any problem, and absolutize the role of technics in making decisions of this kind. At present in industrially developed countries, the technician and technology turn to a dominating axis of the technosphere function, and in the future they will turn on the demiurgical vector, the global-planetary technomorphic complex, original technogenic «ghetto».

So-called «Technological imperative» [dictate], the essence of which is conveyed as what can be done, will be done to satisfy determined needs, is the feature of creators of such technomorphic complex. Within a framework of this doctrine, a guillotine, «gas chambers», technologies of human mass destruction appear. As Laura Fermi points out, whether their new baby would operate as a technical object was the only concern of some scientists and engineers working on the nuclear bomb [479]. In due course not all of them have signed the declaration about an interdiction of the weapon of that kind. Moreover, some inventors of means of human mass destruction (like E. Teller) have even become their active apologists.

Quite often technocentrism is a form of professional hypocrisy, an instrument of cheap politics, the purpose of which is to disorient public opinion, to impose to a society the priority financing of morally doubtful technical projects. The nuclear lobby never wanted to lose the exclusive financial support of its activity. However, at different times they used different ways. In 1960th years the nuclear scientists promised to create a glut of almost free energy, however have created instead ... the mountains of the thermonuclear weapon. When their advance payments remained not paid, they have put forward the thesis about necessity of preservation of nuclear parity. In years of reorganization the directors of many enterprises VPK consciously sabotaged the conversion projects. The thesis about necessity of preservation of corresponding «national» scientifically-engineering schools, about prevention of the outflow of the military-engineering talents abroad becomes popular. It is applied to the experts who develop technologies that initiate effects «brighter than the thousands of stars», though it is a question of «engineers» in general. In addition, recently they have even started talking about altruistic (but much costly) preparation to the rocket-nuclear bombardment of the wandering space objects.

Criticizing the essence of technocentric credo, Hans Lenk writes that «the person has no right to develop everything that it is capable of developing, and has no right to put into practice everything that it can produce. The appeal «to be able «comprises» should do», and is not at all an ethical precept, and there should not be any unrestricted «technical imperative» at all. The valid precept of mind, – he continues, – is: wise regulation, self-control and abstention» [248, p. 173–174].

The XXth century has shown that in a problem of responsibility of the engineer before history and mankind, it is necessary to distinguish between a position of «inventor» as «the pure» researcher and a position of the engineer-expert. But it is not necessary to absolutize neither of them, and, first of all, not neglect the responsibility of the inventor for the «technics» he creates.



Unfortunately, the dehumanizing of technical activity which is in progress, generates the thought according to which, the modern industrial society inevitably forms the «instrument-technical mind» of the technical workers. Domestic experts notice that «the engineer with the «instrumental mind» can operate as a deprived of flexible and normal human intelligence robot, which does not consider the person at all, and brings everything under control of technics and manufactures. According to critics of the concept of the «instrumental mind», such «brutal» engineer represents huge «technocratic» danger to a society» [483, with. 16].

Considering the problem of the ITP responsibility, the publications underline that technical experts, «engineers and representatives of natural and exact sciences in the industry and of a society are not the «agents» of some technological imperialism, are not adherents of the technological imperative slogan of which proclaims: «Do everything that can be done! Produce everything that can be produced! «The representatives of technical intelligence are obliged to reject such appeals, «and not only because they are unrealistic expectations, but also because it is reasonable to prevent the arbitrariness in technical and engineering activity» [248, p. 23].

The objectified form of technocratism is also well developed in the world. It is exemplified by the layers of technical intelligence who are the carriers of technocratic ideology, or so-called technocracy, social systems which are built on the basis of ideology of technocratism, and finally, technocratic ethics which serve as the imperative and standard system of a certain sample of behavior and action. There is a mass of examples of the objectified form of technocratism.

The so-called technocracy and its new kind – computerocratia is the most widespread form of existence of technocratism, to which all social world, and in particular educators are rather sensitive. The life of a normal person from Aristotle's times supposes not only professional creativity, but also constant orientation toward creation of good. Modern technical, economic

and sociopolitical realities testify to the other things: computer technologies, probably, will serve not to normal human, but to political interests of the financial groups connected with the production of information at the first place. It will take place because «in a post-industrial society, it is not the land and capital that play the role of restricting factors, but information. Therefore, the political and economic power is being shifted to the producers of information» [440, p. 398]. Computerocrata of these circles is shown in attempts to adapt the legislation, which is rigidly determined by languages and algorithms of programming, to requirements which impose on a society the rule of gathering, storage, distribution and using information, which follow from specificity of the computer technologies development, the electronic-digital technics and communication networks.

The tendency of computerocrata focuses attention on the problem of informational privacy protection of citizens raises the danger of total computerocrata's control over the person in a form of unapproved by the law use of the citizens' personal data. «When such cybernetization state « seizes «as ice or as the concrete seizes, strictly speaking, it will be too late to search the way back to a free human society», – Z. Ellyul rightly notes [536, p. 151].

Thus, if during almost all the XXth century the world community was in a captivity of the «man of iron», the beginning of the XXIst century testifies that it could find itself in the networks of computerocrata, which through the massed attacks is intensively approaching a person by means of virtualization of its consciousnesses.

To figure out the dominating in this sphere outlook of managers is not complicated at all, as we know well the phenomenon of technocratism in the area of control over both the technical sphere and a society. Well-known are also the negative consequences of hyperbolization of technocratic outlook of managers which lead the social systems, and within which the person in reality has been turned on a «cog in a machine».



Forms of technocratism are of two kinds: one of them is of subjectified origin, and the second one is of objectified origin. The first kind includes ideology, cognitive processes, outlook, belief, stereotypes, models, etc., and the second one includes technocracy as a carrier of technocratism, specific type of social systems, for example, so-called «technical state», finally, certain evaluative – normative ethics, etc. The essence of technocratism consists in introduction of certain actions and algorithms of behavior to any sphere of person's life. Especially accurately and aggressively it is demonstrated in application of principles of technocratic control over social processes, strict pursuit by a person of own planned goals of development, in disrespectful attitude to a person and its transformation in a cog in a social machine.

Technocratism as ideology began its essential influence on social systems and person in the beginning of the XXth century; it is fixed by the emergence of technological determinism, due to which, technical knowledge, especially its technological component, has started to be used as the methodology of control over social processes; this has led to the attempts to create «the technical state». However, we will consider the ideology of technocracy and its consequence for our life in the next subsection.

The nature of the phenomenon – the third category of substance in biosphere, according to V. Vernadsky, is a bio-osteal (osseous) substance. By it he implies a complex of interacting living and osteal substances. Technical cybernetics – the area of science which studies technical control systems – studies it [452]. The most important directions of research is elaboration and creation of automatic and automated control systems, and also automatic devices and complexes for transfer, processing, and storage of information. One of its most important directions is elaboration and creation of different automatic devices: technological (for example, automatic machines, automatic regulators, etc.), metric (automatic gauges, registrars, measuring complexes), information (computers that can control).



The essence of control over technical systems consists in maintaining them in a certain range of functioning. It implies the maintaining of a constant value of certain parameter / parameters or the adaptation to environment according to certain algorithm [73, p. 77]. Infringement of organizational parameters reveals itself as technogenic accidents. Suffice is to use as examples the atomic power stations of Ukraine and Japan, numerous collision of sea-crafts and cars, run out of control of other technical devices.

The content of management of the world of technology is reduced to a set of organizational processes of «interjoining» the systems of machine, and formation of specific networks up to generation of a network's society, and also the mediacy of organizational interaction between persons and technics.

The content is so many-sided, and it covers all constituents of human lives that it is impossible to take an inventory of all interactions between person and technics, and, moreover, between different technical systems. The content of the processes of technical systems' is stated in guidelines to work, recommendations of consumption, job description of managers, and professional duties of experts.

It also relates to the spheres of military activity, in which, on the contrary, the specifications of behavior of destruction of public, military, and diplomatic relations of the opponent are given. It appears that spheres of a person's life seem different, and an orientation of action of the manager is opposite to the organization of normal public life, but the content remains the same. Thus organizational activity of the commander of military subdivisions is the most regulated by the documents and technical possibilities of technical systems, for example, the submarines command, plane control.

Unlike the control over biological and social systems characterized by ecological and cultural urological paradigms, the forms of control over technical systems are characterized by essentially other paradigm – the technological one, hence, it is



reasonable to distinguish between the following forms of control over the technical systems: a) manual, b) automatic, c) automated (the person in control).

The automatic form of control is the most desirable, of course, as it reduces risks of negative display of the psychological factor that is the person's errors. There is even a special theory of automatic control (TAC) providing the service to this form of control over the technical systems.

Modern systems with the output reverse connection allow developing of regulators for difficult systems with multichannel inputs and outputs, having solved the matrix equations at the digital computer [See: 53].

According to the standard approach, the system can be described precisely by means of a mathematical model. At present for elaboration of stable modern systems, in modern multidimensional systems the considerable part of intuition of the classical control methods can be applied.

With existing achievements in the theory of a digital control and discrete systems, modern means maximally meet the requirements of the elaboration of systems of management which can be applied to microprocessors. It allows introducing the dynamic characteristics of controllers, more complicated and more effective, than simple Under-regulators and integrodifferentiating structures of classical management facilities.

Systems of automatized control are one of the most complex directions of designing of management systems. For example, for elaboration of systems of control over the technological chemical processes, from the very beginning engineers of different specialization will be involved. The mechanical engineer will define and will elaborate most of details of the machine, and the electrical engineer will know how to connect properly all these complex details, kinds of necessary gauges and actuating device, and also how all mechanism will function. The actuating device is a device for mechanism actuating, for example, the direct current engine. The



engineer-chemist will define time of reaction of certain chemical substances, and also optimum temperature and a pressure for the processes. The engineer of the software will unite all specifications and will create the software which should meet functional requirements of all other engineers. All these engineers should communicate before and during the project, thus everyone should know language of designing of management systems.

3.2. Morphological characteristics of technical systems management

The subsection task is to consider morphology of control systems of technical systems that is not a big secret as it is morphologically separated from external environment and its creator – the man, and is materialized in a particular device which is added, as a rule, to the object of control.

In terms of dry language of the theory of automatized management, it is reduced by to a regulator, object of control and control arrangement. The control equipment is a set of devices which help to control the inputs of object of control. Regulation – the control special case, the purpose of which is to support at a set level of one or several outputs of object of management.

Technical systems themselves look like as mono-quantifiable, that is systems with one input and one output, and multi – quantifiable – systems with several inputs and outputs. Feedback is an obligatory element, wherein on a regulator input the valid value of initial variable is injected, and also a preset value of the regulated variable.

The morphology of system of automatized control (SAC) looks absolutely different in a mirror of philosophy of management. Metal



constructions come to life and are filled with absolutely different life. In philosophy of technics E. Kapp and P. Engelmeier certainly are the pioneers of biological interpretations. In his work «The Doctrine about the Invention» P. Engelmeier writes that if in the Darwinism formula to substitute every «word organism for a word invention, we will receive an exact picture of history of technics» [Quot.: 538, p. 93].

This train of thought, possibly, was initiated, on the one hand, by E. Kapp's principle of «organ projection» which P. Engelmeier analyzed and subjected to criticism in his work; on the other hand, contrasting the organism and mechanism (many philosophers turned to such comparison in the beginning of the century); thirdly, it was conditioned by searches of the basis for establishment of scientific «laws» of development of technics. It was tempting to generalize Darwin's theory of evolution by expanding it to the sphere of artifacts.

To prove his hypothesis, P. Engelmeier, first, tries to demonstrate that it is possible to conform basic biological phenomena to certain technical phenomena (for example, a biological individual – to a particular exemplar of invention, selection – to test results of the invention in practice, etc.), secondly, he proves, that it is possible in the technics to establish the idea of natural selection. «On the one hand, the innovation should meet and adapt to the requirements of practice, on the other hand, – it joins battle against competing things of the same kind... We do not forget, of course, that the struggle between inventions is nothing but the struggle between people» [538, p. 92, 94].

The morphology of the system of control over technical systems has the specificity as it is based on three fundamental principles: 1) the opened control; 2) the closed control (feedback); 3) compensation of deviations/indignations [74, p. 37].

Social networks, for example, the Internet have more complex morphology. It is essentially new type of structure of virtual systems. *Интернетонни* (*Internet* in English) – the world-wide system of integrated computer networks constructed on the basis of

IP and routing IP-packets [189]. The Internet creates global information field, forms a physical basis for the World Wide Web (World Wide Web, WWW) and sets of other systems (protocols) of data transmission. It is often referred to as the WorldNet and the Global network; in speech sometimes the abbreviated name *инетонни* is used. Nowadays most of the time the word «Internet» implies not a physical network but the World Wide Web and the accessible information in it.

The Internet is the wide, disseminated (distributed) network which contains the computer knots which are distributed around the world. According to some sources, the Internet network has covered over 100 countries, has connected almost to 40 thousand separate networks, 1, 7 million of which are central computers. When you connect to the Internet, your computer becomes a part of this WorldNet of computers.

The Internet is a network of the computers networks, a large number of networks which are connected by means of internetwork sluices. There are two important characteristics which unite them:

1) all networks agree to use uniform conventional definitions in order to decide how to transit the data, and how the errors will be processed;

2) all networks of the Internet have the mutual way of addressing messages, and a special identification of computers comprised into the Internet system.

The Internet it not a company, no one controls the Internet in its entirety. Each independent network as a part of the Internet has its own rules, instructions, and makes decision concerning the general accessibility of the information. No one actually owns the Internet Internet networks can provide access to resources of information, telecommunication service (e-mail or e-mail, information displays, computer conferences, archives of the data, the general software, interactive catalogues of libraries, file transfer, etc.). The Internet is a system which continuously is being developed by people who use its services.



Despite the ironical smiles of professionals, the Internet may be compared to «the information highway». It is distributed, with many branches network of roads, which comprises highway, routes, and tracks. There is a computer at each crossroads, through which you get to another one, and continue until the destination is reached.

Any computer in a system of the Internet can be connected to any other computer by means of a «road map». If road to that place of destination is closed, the detour will be automatically found. The divergence in the Internet and high system work consists in traffic speed. To get to the USA one will be needed as much time as he needs to get to the nearest crossroads. Having arrived to the point of destination, it is possible to control the computer of this point at a distance. It is possible to choose and receive necessary information for split second.

The morphology of the systems of technical systems management, that is elements and structure, is explained by the philosophy of management, since it exhaustively answers the question: what are the subject and object of technical systems management?

In this sphere of human life, the subject of management is the qualified expert – the operator, the engineer, the dispatcher, the operating machine (Automatic Control System, CAD/CAM system). The measure of its intervention in self-regulating processes of self-expansion of technical sphere is defined by volume and the maintenance of knowledge, and a measure of self-development (self-expansion) of scientific and technical progress.

Today, during the present stage of scientific and technical revolution, the measure of penetration of the person in a management sphere of technical systems considerably increases. It is exemplified by penetration of computer technics and information technology into management of technical systems.

Technical, technological, transport, power, administrative processes are the object of management [74, p. 37]. The object of management and managing system are artificially created by man [73, p. 77].



The type of structure of management is stable, as it is purpose built to fit the conditions of particular environment and realization of certain functions.

The source of administrative influence is located in the environment, is structurally executed as a separate independent subsystem in a form of a device of management. Complexity of morphology of a system of management of technical systems is defined, at least, by two factors: 1) dimension of system or total of parameters of system that characterize its condition; 2) complexity of structure of system which is defined by total of interconnections of its elements, and their variety [73, p. 76].

Obligatory element of morphology of the system of management of technical systems is the device which is responsible for feedback in the technics – it is a process due to which the result of functioning of any system influences the parameters, the functioning of this system depends on [328]. In other words, at a system input the signal proportional to its output signal (or, generally, that is function of this signal) is given. Often it is done on purpose, to affect the dynamics of the system functioning.

Positive and negative feedback is distinguished, that it is a fact of great importance for us. Negative feedback changes the input signal so that to counteract the change of the output signal. It makes the system more resistant to casual change of parameters. Positive feedback, on the contrary, strengthens change of an output signal. Systems with a strong positive feedback show a tendency to instability, not fading fluctuations can emerge in them that is the system becomes the generator.

Management of any kind, and the management of technical systems is not an exception, is connected with information transfer. As usual, the information is transferred by means of prearranged signals, in a coded form. Signals in the technics are transferred through channels of electric communication, i.e. they are energetic by the nature. They are the means of management realization. As a rule, the signals in a management system are of two kinds: some



contain a command or the order to make something (such signals are called the heads, regulators), other signals inform about performance of a command or about response to the object of management. There are communication channels for each kind of signals: from the object performing controlling function to the operated one (the way the commands are given), and from operated object to the head (a way of information in response). These channels of information transfer are referred to as a straight line connection and feedback.

If the person supervises any of the processes, he observes (directly or by means of devices) and estimates results of his actions. In case of systems of automatic control, the automated device controls the work of machines (see the automatic machine, automatics). In this case the feedback is absolutely necessary. We will consider, for example, how the regulator of Watt, which maintains the frequency of a shaft rotation, for example, a steam-engine shaft. If the shaft on which a regulator is located starts to rotate too quickly, the spheres of a regulator disperse. As a result, the levers, which connect a sphere with the valve of the machine steam supplier, move and cover the valve whereby, reducing the amount of the steam given into the machine. The frequency of a shaft rotation decreases immediately. On the contrary: if the machine shaft rotates slowly, the spheres of a regulator approach each other, and as a result, the levers open the valve whereby, increasing access of steam to the machine. There is a direct action in this example – the rotation of a shaft of a steam-engine, and reaction in response to the regulator – opening or closing of the valve of the steam supplier.

Feedback action is thus demonstrated doubly: the controlled, regulated process can either amplify, or be weakened. If, for example, the frequency of the rotation of a shaft of the machine owing to feedback action continuously increases, the feedback is referred to as the positive one. Positive feedback is obligatory for any generator of electric fluctuations, because only owing to it in the

generator not fading fluctuations are being sustained. Without positive feedback, because of inevitable losses of energy, the generator will necessarily stop.

If the result of feedback consists in the regulated process weakening, the feedback is referred to as the negative one. All, without an exception, automatic regulators operate by a principle of negative feedback. Each regulator has a sensitive element – the gauge, or the primary converter: the device which sensitively reacts to changes of frequency of the rotation of a shaft of the machine, liquid level in a tank, temperature in the furnace, concentration of acid in a solution. For example, in a floater water level regulator of the tank – one of simple automatic regulators – the float rises or falls together with water and pulls the lever. When water rises above needed level, the float rises together with it, and pulls the lever which moves valve blocking the access of water to the tank. Thereby the constant water level in the tank is reached. So, owing to feedback in a system of automatic control, the object of control seems to be self-controlled. By means of feedback it can either change its condition following certain law, or sustain it invariable, stable.

3.3. Functional aspect of management of the development of man-measure systems of technology of the future

The task of this subsection is the reproduction of functional aspect of control over technical systems. In horizon of dry language of the theory of automated control, the characteristic of functioning and development of a phenomenon of control looks as the process reproduced by cliché, it is constricted within specific function schemes which reflect both signal input and output signals, and their correlation.



According to the nature of action, they are classified as systems of continuous action and systems of discrete action. According to a measure of use of the information about a condition of object of control, such as: feedback control and control without feedback. According to a measure of use of the information about parameters and structure of object of control, such as: a) adaptive, b) nonadaptive, c) search-type, d) non-search type, e) with identification, f) with replaceable structure. According to a measure of person's involvement, they can be: a) manual, b) automatic, c) automated (the person in management).

The philosopher has absolutely different idea of how the control system is functioning. In the centre of his concern is an issue to what degree the biological laws can be transferred to a technical reality, and can it be done correctly? It is known that, once in a while since E. Kapp and P. Engelmeyer, the philosophers of technics have tried to realize this idea. The most interesting modern researches in this area belong to S. Tulmin and B. Kudrin.

“In his article «The Innovation and Problem of Appendix» S. Tulmin does attempt to transfer the methodological model of evolutionary changes, which he has developed on the basis of the Darwinian theory of natural selection, in a sphere of technical inventions (innovations in the technics) and has received the scheme very similar to P. Engelmeyer's results. S. Tulmin distinguishes three phases: 1) a mutation phase, when new variants are created; 2) a selection phase, when selection of variants for practical use is done; 3) a phase of ecological diffusion and domination, when variants successful in limited environments (or niches) are extended to larger human environment» [131, p. 95, 97].

B. Kudrin, the author of technetics shows that, if the technics is seen as a set of weakly related items, definable by documents, as well as by such features of innovation activity as diversification, variofication, asortion, the technics can be considered as a natural formation that resembles biological communities. «Thus, we can compare the world of machines with wildlife (with large animals



and birds, comparable to the size of man: anthropological evaluation). This refers to the possibility of identifying and removing each piece of equipment and its local replacement as an individual to another (in case of the need to preserve the ecological niche), i.e. the other machine can be regarded as an organism, figuratively speaking – a separate animal... The first fundamental difference of the product from technocenosis is already in the definition of technical coenosis: it is a community formed practically by an infinite (which defies calculation) set of loosely coupled and weakly interacting products, for the purpose of knowledge that stand out as a whole» [236, p. 26, 27].

"If you suggest that the individual-product plays the same role in technology as the individual-animal (plant) in biology, the natural laws of information and selections match ... technoevolution is the creative process based on verification. Availability of innovations through trial and error, specialization is required for technoevolution. Ontogenesis is realized according to the document and technoevolution is generally a nonprogrammed development, where the continuity of which is revealed in the document is a fundamental property» [237].

It should be noted that the notions of the document, verification, innovation, samples suggest not only a natural guarantee of thinking, but also an artificial one – all these are cultural formations. Trying to solve this contradiction, B. Kudrin introduces new interesting ideas about technology and techniques within which artificial phenomena act as natural ones. B. Kudrin defines technology as a «part of the technical reality», and the technique – as the procedural side of technology. «Thus, the technology forms a frame structure technocenosis and technology provides processes (and is in them) and the functioning of individual machines, units and technocenosis in general. Technique is the soul of technology that materializes. The basis of it is a single documented technological process, the act of movement» [236, p. 11].



The system of technosphere management functional characteristics also has largely specific features. First, the tool of management system is created artificially by man for a separate process or group of processes, such as autopilot. Management effect on technical system is provided by three clusters of functions: a) the functions that define the change of state of all elements of the system, and b) the functions that define their starting signals, c) functions that cause changes in the structure of the system [73, p. 75].

Second, the relationship between the subject and object of management tend to be constant, so they should even be considered as «subject -object» because they are served by the structural information in the form of energy-informational influences.

Principles and methods of administration are determined by the quality of output parameters of technical systems. Among the management practices prevalent are the mathematical modeling and programming, operations research and others. The management system has a range of influence on the technosphere. The upper limit of the influence depends on power (computers), and the bottom one – on the range of the sensor sensitivity. The information provision of management is the availability of data banks, processors, mechanical memory of PC or computer. The amount of information for realization of the regulation of the behavior of the object is artificially laid by designers of control systems.

The mode of the influence of the governing body which is built into management algorithm [74, p. 37], i.e. strictly set by the designers, is specific on the technical system, taking into account the dynamic properties of the system, physical and technical limitations. The channels of influence of the management on technical system are special communication channels of information communication and the tools are informational and analytical devices. Today the most common tools of management of such systems are on-board computers, such as on airplanes, ships, river ships and ferries.

The criterion for the quality of management of technical systems is morphological integrity and functional stability of the



structure, which we know as homeostasis. Here quantitative indicators of the technical structure are prevailing. Control over their condition is provided by mechanical feedback (positive and negative, that an increase in temperature above the set one the heat flux reduces, and in its fall – it increases) [73, p. 77].

Characterization of management parameters and creation of the self-regulation body is based on reliability, minimum power inputs and material consumption, financial costs on development and maintenance.

So, at the end, we shall make the main conclusion of the material discussed above. Its main point is that the tools of philosophical analysis, initially justified by us in the second chapter, worked successfully in the field of technical systems. Categorical apparatus, methods and principles of philosophical analysis were sufficient enough to provide rather detailed analysis of technical systems management.

On this basis, we have confidence that it will work effectively in the field of biological and social systems management, which in practice means that over time major ideological and world-view, morphological and functional characteristics can be combined in comparative analysis.

Already on the basis of a comparative analysis of the above features of technical, biological and social systems management we can identify the patterns that occur in this area that will be a reliable philosophy underlying the development of the general theory of management.

3.4. Theoretical form and practice of technical systems management

The objective of this subsection is to formalize the theoretical aspect of technical systems modern management practices. Based on the above written there can be considered a working hypothesis



that the object of study of general management theory in this case may be «subject-object» relationships, because a man in this system is embodied in the products and actually physically is not present. Note that no one controls the Internet and rover «Curiosity» also works according to the programs laid into it by the designers and programmers.

One of the «classical» philosophical problems raised by the philosophy of technology is the origin of the technology and its connection with nature and society. At a philosophical level, this issue means trying to study the process of the new technology formation – that is the process of research and development work. It is similar to the process of research in science, and, therefore, can be examined with the epistemological methods.

However, as the technology is not fundamentally limited only to the «applied nature science», there is a fundamental difference between the creation of new technology and the process of scientific investigation. For example, the goal of the founders of a new scientific theory is finding the way to develop more general patterns. The founders of technology this concerns very little, their goal is to develop a specific technical solution. Therefore, unlike natural science, engineering (technology) is formed as knowledge «ad hoc», which entails a significant difference in prognostic methods of technology and science.

This situation arises from significant differences in approaches to the study of the object under analyses, characteristic of natural science and technology. Natural science, trying to comprehend the objective, i.e. independent of the will of the scientist-naturalist, the picture of the world, seeks to minimize those inevitable distortions that bring into the Universe the existence of naturalist himself. For the technology, for which its complexity and perfection is the basic gnostic act, as they say, exactly the opposite happens – the object of study is the subject of constant change during learning, not only according to its progress, but also according to the will of their creators. For example, creating a new model of aircraft its research



is conducted in the wind tunnel, and according to these results the model may have some design changes. Although the changes in the design can be made not only on the basis of these tests, they can be quite arbitrary.

Thus, this point of view is that science and technology are purely different by their gnostic methods. There is also a number of competing perspectives. One of them is the fact that since modern technology widely uses science achievements in its practice, and, moreover, because different areas of technical knowledge have gradually emancipated to the level of «engineering (technical science)», so we should speak not about «science» or «technology» as separate phenomena, but about a single phenomenon of modern science and technology. This view is extremely popular among Marxist scholars in the field of philosophy of technology; moreover, it is well combined with a known Marxist thesis «about the transformation of science into a direct productive force of society». The second, somewhat paradoxical view was advocated by the German philosopher P. Yanikh in his well-known article «Physics – natural science or engineering? » [545]. P. Yanikh also believes that science merges with technology in a complex. He states the following: activity of physics, based on observation, measurement and experiment, is a technical work, and the physics itself, in a certain sense, – is a kind of technology that describes the behavior of certain artifacts.

According to Yanikh, physics as a science was based on the use of devices, which are the technical artifacts. Moreover, from the point of view of physics, the scientific result is such, when we from the simple observation of objective entities can proceed to their dimension. However, according to Yanikh, any measurement – is a way for production of artificial, i.e. technical phenomena. Indeed, any scale is artificial in nature, being a product of human culture. This is true even for such a phenomenon as the time, which is regarded by Yanikh as an objective, but quantized according to the temporal concepts of humanity, produced by culture.



Finally, a physical experiment in his description appears to us as a specially organized artificial object, since for its formulation we always have to technically implement these or other conditions of the experiment. Summarizing all this, Yanih concludes that rather natural science must be understood as a secondary consequence of technology than the technology – understood as the application of natural science.

A specific branch of scientific knowledge serves the activities of technical systems' management that we know as the theory of automatic control (management) (TAC). Its purpose is to provide a «set of actions aimed at maintaining or improving the functioning of a managed object without the direct involvement in it of an individual in accordance with the purpose of management» [72, p. 141]. The object of its attention is «subject-object» or objectified relationship.

To the theory of the automated control (management), i.e. with the participation of an individual, may be added the heuristic potential of sciences such as information theory, coding theory, theory of algorithms and machines, general theory of systems, the theory of pattern recognition, formal language theory [73, p. 79]. These sciences widely use mathematical and analytical and experimental methods of learning with extensive use of modeling method in the development of control systems of engineering systems [73, p. 78]. Together they are working to create an artificial intelligence that is able to transfer the management of technical systems to a new level of regulation.

In addition, intellectually, the branch of the management of technical systems is based on other theoretical concepts, such as the theory of automatic control (TAC), the theory of nonlinear control systems, optimal control and assessment theory, stability theory, mathematical control (management) theory, game theory, information theory, fuzzy knowledge theory, stochastic analysis etc. [See: 54].

The problems of management theory can be divided into three main classes:



1. Problems of modeling: finding the right mathematical model for a real system related to mechanics, electrical mechanics, mathematical physics, biology...

2. Problems of analysis: analysis of the properties of the system (controllability, traceability, stability...).

3. Problems of synthesis: creating the controller with feedback that stabilizes and optimizes the characteristics of a closed system, the study on the issues of the system stability.

Modern systems with feedback at the output give the possibility to develop controllers for complex systems with multi-channel inputs and outputs, having calculated the matrix equation on a digital computer [See: 54].

According to the standard approach, the system can be accurately described by a mathematical model.

When developing sustainable modern systems much of intuition from classical management techniques can now be applied in the present multidimensional systems.

With the current advances in digital control theory and in discrete systems, modern means best fit the development of control systems that can be used on microprocessors. This allows you to implement the dynamic characteristics of the controllers, which are more complicated and more effective than the simple PID regulators and integrated differentiating structures of classic techniques of control.

Computer-aided control systems is one of the most complex areas of the development of management systems. For example, into the development of the systems for the management of technological chemical processes engineers of different specializations will be involved from the very beginning. Mechanical engineer will define and develop the majority of machine parts and electrical engineer knows how to connect all these intricate details, which types of sensors and actuators are necessary, as well as how to operate the entire mechanism. Drive (actuator) – is a device for actuating mechanism, such as a DC



motor. Chemical engineer determines the reaction time of certain chemicals and the optimum temperature and pressure for the process. Software Engineer will unite all specifications and create software that meets the functional requirements of all other engineers. These engineers must communicate before and during the project, and each must know the language of control systems designing.

The analysis of categorical apparatus of technical systems management concepts can be performed adequately on the basis of categorical apparatus of the theory of automatic control (TAC). TAC is a discipline that studies the processes of automatic management of objects of different physical nature. In this case, using mathematical tools the properties of automatic control systems are revealed and the recommendations for their design are developed.

Management component in this area has its own history of automatic control theory creation [447]. For the first time the information about the machines appeared at the beginning of our era in the writings of Heron of Alexandria «Pneumatics» and «Mechanics», which describe the machines created by Heron himself and his teacher Ktesybiy: pneumoautomatic device that opens the door to the temple, the water organ, automatic machine for selling holy water and others. Heron's ideas were much ahead of his time and were not used in his era.

In the Middle Ages, the simulation «android» mechanics was characterized by a significant development, when the design engineers created machines that reproduced some of the actions of people, and to strengthen the impression the inventors gave the automata formal resemblance to the man and called them, «android», and i.e. humanoid. Currently, these devices are called robots, unlike widespread in all spheres of human activity of automatic control equipment, called automata.

In the XIII century German scholastic philosopher and alchemist Albert von Bolshtadt built a robot that opens and shuts

the door. Very interesting androids were created in the XVII-XVIII centuries. In the XVIII century Swiss watchmakers Pierre Droz and his son Henri created a mechanical scribe, mechanical artist and others. Beautiful theater of automatic machines was created in the XVIII century by Russian self-taught mechanic Kulibin. His theater, which is stored in the Hermitage, is located in the clock, which has the shape of an egg.

Many theses of the theory of automatic control in embryonic form is contained in the general theory of (linear) controllers, which was developed mainly in the years 1868–1876, in the writings of D. Maxwell and I. Vyshnegradsky. Principal works of I. Vyshnegradsky are: «On the general theory of regulators», «On the indirect action regulators. In these works the origins of modern engineering methods of sustainability and quality control study can be found.

Decisive influence on the development of national research methodology of the automatic control theory was made by the works of outstanding Soviet mathematician A. Markov, the founder of the so-called constructivist school of mathematics, the author of a huge number of papers on the theory of algorithms and mathematical logic. These studies have been used in the scientific and practical activity of academician S. Lebediev after the military theme – the automatic machines of torpedoes and aiming missiles control and stability of large power systems. At the beginning of the XX century in its first decade the theory of automatic control is formed as the general scientific discipline with a range of application partitions. It is nowadays that in the world, especially in Japan, there has been a boom in developing androids that can play almost entirely natural movements, modern human language, and perform trade operations in many workplaces [15].

Based on the application of mathematics in practice, a rigorous theoretical view has developed that has formalized the planetary community developments in this field of management. Theory of automatic control (TAC) is a scientific discipline that identifies



common patterns of functioning characteristic of automatic systems of different physical nature, and based on these patterns develops principles of quality management systems formation [449]. In the study of management processes in TAC we abstract from the physical and structural features of systems and instead real ones we consider their appropriate mathematical models.

The specific principles of the automatic control system management (SAC) on the basis of feedback (return coupling) have been formed. Return coupling is the coupling, when to the input of the controller the actual value of the output variable and also the given value of the controlled variable is set to.

We distinguish two types of feedback (return coupling): a) hard – such feedback, in which the input of the regulator receives a signal proportional to the output signal of the object at any given time, and b) flexible – such feedback, in which the input of the regulator receives not only the signal proportional to the output signal of the object, but the signal proportional to the derivatives of the output variable.

Management according to the principle of a controlled variable deflection: feedback forms a closed loop. The action, proportional to the sum (difference) between the output variable and the set value so that the sum (difference) decreases, is given on the managed object.

Management on the principle of disturbances compensation: the input of the regulator gets a signal proportional to the perturbing action. There is no relationship between the management action and the result of this action on the object.

Management on the basis of the combined control: both, regulation according to disturbance and regulation according to rejection are used simultaneously, which provides the highest precision of control.

There has been elaborated the classification of automated control systems (ACS): 1) according to the type of control: a) management systems, b) control systems; 2) according to the type of action: a) the



systems of continuing action, b) the systems of discrete action; 3) according to the use of information about the condition of the subject of management to: a) control with feedback, b) control without feedback; 4) according to the degree of using information about the parameters and structure of the subject of management: a) adaptive, b) nonadaptive, c) with search, d) without search, d) with the identification, e) with variable structure; 5) according to the degree of coordinate transformations in ACS: a) deterministic, b) stochastic (with random actions); 6) according to the type of mathematical model of coordinate transformations: a) linear, b) nonlinear (relay, logic, etc.); 7) according to the type of control actions : a) analog, b) discrete (discontinuous, pulsing, digital); 8) according to the degree of human intervention: a) manual b) automatic, c) automated (people in management); 9) according to the law of the change of the output variable: a) stabilizing: setpoint of the output variable is unchanged, b) program: output variable changes by a certain, predetermined beforehand program, c) tracking: setpoint of the output variable depends on the value of the previously unknown variable at the input of the automatic system; 10) according to the number of managed and controlled variables: a) one-dimensional, b) multidimensional; 11) according to the degree of bootstrapping, adaptation, optimization and intelligence: a) extreme, b) bootstrapping, c) intellectual; 12) according to the influence of sensing (measuring) element on the regulatory body: a) the systems of the direct control, b) the systems of indirect control [449].

Types of management. Earlier one kind of control had been used – stabilization, i.e. the support of the permanency of the option, which was regulated, and later the systems of programmatic management appeared, the tracking systems, search systems, systems of extreme control, optimal control, self-adopting systems were used [74, p. 37].

Here you can select, in our opinion, the following levels of technical systems management, the level of: a) object b) complex c) system, d) network.



The area, in which the management function is implemented, is an important philosophical characteristic of technical systems management, since it is closed and, moreover, artificially created by a man-designer. The volume of management is determined by the degree of penetration of the human mind in inert non-living matter, and it is usually negligible. Today people are trying to cover the area of the state by creating e-Government in the country.

Electronic government (e-Government) is a model of governance that is based on the use of modern information and communication technologies to improve the efficiency and transparency of government and the establishment of public control over it [170]. E-government is a model of governance in which the whole totality of both internal and external relationships and processes is supported and provided with the relevant information and computer technologies. In other words, a necessary condition for the transition to e-government is a broad computerization of all processes in the daily activities of ministries, governmental departments, and local authorities, both internal and external.

Basic principles of e-government formation are:

- Providing services at any time (e-government is open 24 hours a day);
- Maximum simplicity and transparency (serving ordinary people, not just experts);
- Common technical standards and interoperability (electronic application must comply with the principles of unified identification systems architecture, security, design);
- Ensuring compliance with the rules of confidentiality and information security;
- Unconditional focus on public opinion in the implementation of innovations.

There are 5 main stages in the development of Electronic Government:

In the first phase created a web resource of various ministries and agencies that provide information about their mission and



activities. Websites of government bodies are generally not supported by centralized or combined into a single portal.

In the second stage there are the first elements of interactivity (eg, sending and receiving answers of citizens through e-mail). Regularly publishes news about the activities of public authorities.

The third stage describes the appearance of full interactivity – the possibility to make transactions (services) are online (for example, pay a fine, order a passport, to extend certain patents and licenses, etc.). This specification of the electronic control that is not so much to inform as to maintain, requires the creation of special sites to support these services not only central, but also for the city and even county governments.

The fourth stage – the creation of integrated portals of various departments and services through which you can make any kind of transaction for which previously required applying directly to the state agency. A regional portal makes possible registration, processing financial documents, legalization of foreign documents and more. There are regional portals that combine both the full range of public services and the services of the private sector – connecting e-commerce, e-banking.

The fifth step is the creation of electronic governance based on common standards, as well as government portal as a single point of access to all services – both for people and for businesses. Most experts believe that the highest degree of development of e-democracy is the introduction of electronic voting systems (electronic voting).

Time dimension, or temporality, limited, as timing parameters of operation of technical systems and a range of the action of the manager are predetermined by a designer. Temporality (from the English *Tempora* – temporal features) – temporary nature of phenomena generated by the dynamics of their particular movement, in contrast to the temporal characteristics, which are determined by the ratio of the movement of this phenomenon to historical, astronomical, biological, physical and other temporary coordinate [See.: 419, p. 298].



In the modern philosophical culture the concept of temporality has come, as it is known, through the existentialist tradition, in which the temporality of human being is opposed to things, to alienated, poor, compulsive, overwhelming time. In phenomenologically oriented sociology and in psychology and cultural studies the concept of temporality is widely used to describe the dynamic objects such as a person, social group, class, society, value («full social phenomena», J. Gurvich). The idea of analyzing social phenomena, which are mutually moving, through comparison of their temporality formed the basis for temporal analysis methodology.

It is prospectively to apply this type of analysis to the assess of management of technical systems, and then it turns out that organizational activities is subject to significant restrictions on the side of external environment and the technical condition of the elements of the object of management. An example would be a car skidding on a wet road surface or engine failure in airplanes.

Here is acting primarily causal-mechanical causality, reflecting the actualization of human needs, creating and constantly improving technical systems. Their functioning on the basis of causal-mechanical causality leads to the formation of goals and objectives as a means to create a program to meet them and get the result, which is provided by the system of self-regulation.

The degree of satisfaction of basic needs is one of the parts of «variable», which gives the actual form and structure of activity. This category is «specifically human form of active attitude towards the environment, the content of which is the appropriate changes and transformations in the interests of the people» [488, 160]. It includes the purpose, the means, the result and the process of activity, which is based on two opposites – production and life activity. Thus, the bases of the satisfaction of vital needs are material and energy impacts, and social needs are met on the basis of information effects with have a slightly different structure. In a causally-oriented people meaningful (concept) regulation will



occupy the initial position, accompanied with the environmental dependence of the circumstances, fixing the attention on the past and present, reactivity of behavior, even aggression.

Thus, our methodological orientations on the analysis of the discourse of technical systems management through the prism of the five grounded above filters are completely justified. And in the most difficult for social philosophers sector – management of technical systems, it, in the course of logical analysis, has been filled with meaning, has acquired man-valued character, fully confirmed the working hypothesis that it is determined by the human in management and maintains its needs, gets and keeps the products of its management activities having general organizational content, and they can be compared with the products obtained in the areas of management of biological and social systems.

Conclusions of the third chapter

Our achievement in this area is the use of management philosophy to analyze the origins, development, operation and management of modern technical systems, which include: computer networks, space and military facilities, railways, air transport, nuclear power plants, boilers, airplanes, cars and other products of innovative engineering.

It is in the area of technical systems the authors replicated the semantic field that shows us the path traversed by researchers and engineers to create systems of technical monsters of our time. Conclusions arising from the above study management of technical systems as a form of social control are as follows: first, the beginning was based on philosophical acts created ultimately ideological and ideological foundation first to create and then



manage technical systems. An example is the management philosophy of the modern Internet and other social networks.

Second, we have shown that there are original methodological tools for the design and implementation of complex technical systems. Their inventions were particularly productive systems analysis, principles of operational systems, computer-aided design system house production management systems (ATC) and the determination of their place and role in computer-aided production management.

Thirdly, formed categorial matrix management of technical systems that can be used even fuzzy knowledge and fuzzy neural network to control the social development of modern society.

Fourth, the management philosophy, because it is possible to identify existing and create new quality paradigm of fuzzy control planetary community. It refers to a paradigm: a) logical control, b) situational management, c) parallel multi-management, d) intellectual linguistic control, e) relational management systems available, f) adaptive management and others.

Fifthly, the presence of so many technical systems management paradigm allows, even requires further philosophical generalization, which has rapidly occur, we believe in two directions, namely the development of the theory of management of technical systems as a logical step in the construction of the above paradigms to the completed form, and further development – to become an integral part of the general management theory as management philosophy suggests organic unity of technical, biological and social systems.

Positive affect and philosophical generalizations management of technical systems that originally provided the human impact on nature as the first lot of search, extraction and processing of natural resources into useful products for her work, and now, thanks to the invention of computers, get the third nature or semantic horizon (noosphere) that serves our social world, satisfying, mainly intellectual needs.

Our investigation in the sphere of technical systems' management has a separate valuable estimation from the view of the



general aim of the research – the specification of this phenomenon for the comparative analysis with the management of biological and social systems. At the same time we should pay attention to the fact that machinery has been quickly occupying all the parts of the modern human existence. Biocoenosis – biological forms of life at the Earth – has been actively replaced with technocoenosis.

Shifting the accents in the sphere of techniques where natural resources processing machines deploy into the machine system able to intrude the linguistics world and semantic substrate is apparent and observed move of technique world's deployment. The human is responsible for the valuable component of social development which is inherent for the human nature as it is based on the human needs.

The reason of it, the techniques world, appearance is provision of a human with a range of products first of which are food, clothes, accommodation, the means of transport that can satisfy mainly a human's physical or vital needs. Secondly the possession of the outer environment as a source of satisfaction of vital human's needs and the sphere of further living which means the around Earth space and so called Near Space.

The following researches' steps must be directed to apply the management philosophy separately to social and biological systems. And only after this, it will be possible to start generalization of the forms of the management manifestation patterns in the three spheres simultaneously. But these are the prospects lying beyond the borders of our scientific research.

CHAPTER 4

COGNITIVE FACTORS OF THE GENERAL THEORY FORMATION IN THE CONTEXT OF BIOLOGICAL SYSTEMS MANAGEMENT

The tasks of this chapter is to check if our knowledge and ideas about biological systems management match the level of knowledge about technical and social systems and the possibility to compare these systems after some time. The algorithm of the checking is the same that was implied for the technical systems management. We proceed from the notion that «biological system» is the integral system of components which have some functions in living systems. Biological systems include complex systems of different level of organization: biological macromolecules, sub cellular organelles, cells, organs, organisms, populations» [58]. Herewith the system has, as it appears from the nature science textbooks, the row of attributive qualities [219].

According to V. Vernadskiy, the biosphere is all the space (the shell of the Earth) where there is or was life which means the existence of the living organisms or their metabolic process products. He did not only concretize and outlined (described) the life in the biosphere but which is more important comprehensively revealed the role of living organism in the processes of the planetary scale. He demonstrated that there is not any more powerful geological force which creates environment than living organisms



and their metabolic processes products [97, p.18]. We are observing the biosphere through the place and role of a personality of a human in the management and relations in the natural link «a human – the environment – the Space». The other examples from the theory of biological systems, which we will consider, are used only to demonstrate that a man is an integral part of living biot. More detailed this segment is given in the author's monograph «The philosophy of biological systems management» [53].

4.1. Ecological thinking as a source of world view and ideological providing sustainability of the planet biosphere development

The task of this stage is to formalize world view and ideological determinant of the biological system management formation as a component of the general theory of management. A man is also a component of this system. I. Pavlov wrote: «A man is, of course, a system (in simple language is a machine), as everything in the nature, that obey unchangeable and common for all nature laws, but the system, in the horizon of our modern scientific vision, unique in terms of the biggest self-regulation. The system is extremely self-regulated, supports itself, renews itself, and even improves on its own» [335, p. 200]. This characteristic is given to a human, as a biological and in this sense – a natural being.

The analysis proves that ideology of biological systems management has not reached the necessary power yet. The world's community is actively looking for it in the inductive way in the ecological imperative discourse. That is why the modern ecology can be observed as a science that studies organisms' interactions including a man with the environment, identifying the scales and



permissive borders of human society's influence on the environment, ways to lessen these effects or their full neutralization. In the strategic view this is the science about people's survival and the way out of the ecological crisis which has reached and is continuing to grow to the global scale – in the borders of the entire planet Earth.

The basic concepts and the basic taxonomic unit in the ecology is an «ecosystem» which means any system that consists of living beings and the place of their existence which is united in one functional whole.

The basic ecosystems' properties –are the ability to provide circulation of substances, to resist the outer actions and to produce biological products. They usually differentiate ecosystems of different range: from micro ecosystems; mezo ecosystems (forest, pond and river etc); macro ecosystems (ocean, continent, natural zone etc) and the global ecosystem – biosphere in general.

There are a few hypothesis in the centre of its attention that are able to make us and our thinking, ideology and practical actions closer to the problem rational salvation. Among them there are the ideas of biocentrism, anthropocentrism, human centrist, ecologically safe development and steady development (Pio-92), and after the Pio+20 (2012) the narrative «Green economics» was added which is perceived today as a credo and as an imperative of the planet's ecology development [181; 181; 516]. The term «narrative», we should remind, is a mean of own experience, life episodes, steps and actions organization [317], in other words is the generalization of own practice.

The most widely spread in the past was the idea of anthropocentrism or the human saving ecology which later became the ecology of a man. The ecological crisis, our planet is found now, is not only the effect of the population growth, but the crisis of consciousness. So, if in the XVIII-XIX centuries and earlier the sense of moral, family, state and religious duties were dominating in human consciousness, in the XIX-XX centuries the ideals of



consuming, comfort and pleasant life have become prevailing. Mankind have not reached any happiness but lost the possibility to live in harmony with nature and itself.

As a result in the end of the XX century the term «ecology» went beyond the university auditoriums and transformed into the political logo and a specific ideology. For an expert that deals with the ecology the term «environment» is unacceptable as the subject of ecology is nature and organisms interaction in it but not a man's surrounding that serves him.

If the biggest part of the XX century was headed with the euphoria felt after technological success, now a man has understood that he is a child of nature but not its owner or a master; the possibility of human life on the planet itself is provided by the coordinated living processes of all the biological species which have been formed (completed) in the biosphere during thousands of years. This kind of ideology can be called biocentric, unlike the anthropocentric, according to which a man is in the center of nature and the universe, and socialcentric in which the centre and the sense of life of a man is totalitarian social or production system.

The steady development nowadays, as an innovative plot, has serious demands both to the scheme of management and to the informative, analytical and human resources provision. The practice shows that a shift from this scenario substantially changes many connections, which have been set, and relations, in particular the structure and the type of interregional and international economical cooperation.

The correctness of basic principles choice, which must be followed in innovative scenario realization, is gaining a special meaning. These principles are: a) the principle of temporary horizons; b) the principle of measuring, which is lying in avoiding aims and tasks, the results (achievements of solving) of which are not reflected in numbers and which make it impossible to monitor them in the process of achieving the needed state (condition); c) the principle of subsidiarity; d) the basic principle of provision of



stability and development of natural and social system is the principle of the feedback that is based on necessary implementation into the monitoring system management that corrects and makes it possible to change the processes, which are sensible for innovations. This particular principle dictates the choice of temporary horizons and the necessity of the subsidiarity.

A sufficient contribution to the understanding of specifics of ecosafe development philosophy has been made by the western alarmists (alarmism is a position, according to which the mankind is threatened to die because of the ecological crisis). For instance O. Toffler, W. Duglas, A. Pachai have stated the ideas of modern ecology as the mankind's ideology that intends to avoid the ecological catastrophe.

The continuation of this thought is the interpretation of the ecology as basics of modern ideology – «ecologism» that is not limited only by purely scientific researches of the environment but is included in all spheres of social and political activity, economics, culture and ethics. Western researches suggest differentiating «ecologism» and «environmentalism». The environmentalism is based on the idea that the management approach will be enough for modern ecology problems salvation. In return ecologism insists on recognition the nature self-value, thus, on the necessity of the radical changes in the man's attitude to it.

Naturalists, who have founded the base of the new direction of the science philosophy, which predicts the appearance of a new stage of the science development, which will supersede the present one, called sometimes post classical one, have played the main role in the formation of the ecosafe development philosophy. In XXI century because of the necessity of realization of ecological demands and the shift to ecosafe development it is possible to predict the strengthening of the same role of the philosophy both in the science and in the society development and its interaction with nature.

The philosophy of ecosafe development «must solve», according to V. Akopyan, «in the future the following main



problems: to develop the concept of mankind's survival based on the recognition of humanitarian human values; to develop the ideology which center would be the new ecological consciousness [342]. It has its own specifics which is generalizing the results of different researches, estimating the situation in general the philosophy influences on the taking the main economical, political decisions forming the world's ideology. Solving particular complex problems of the modernity a human cannot operate without any ideological directives and principles that reflect human values without understanding that in some situations it is necessary to sacrifice some private interests to overcome social risks [7, p. 102].

Considering the ecological paradigm from the subject's side after G. Schedrovitskiy, we should identify a man as a undividable union of the three incarnations: the spiritual person, able to act; the social individual that acts according to some cultural norms; biological organism that lives according to the nature laws (which is the central object for a man's bioecology) [532, p. 12].

The new civilization paradigm must find its evocation in the new ideology which is adequate to the modern stage of coevolution of nature and society. Ecological ideology must modify in different civilizations and countries considering the cultural historical heritage, natural conditions and ecological situations. The ecological component must become inseparable part of the post industrial society morality [130, p.14].

The ecological paradigm can't base only on scientific researches but must include the moral imperatives which can provide the ecological consciousness in the borders of ecology spirit. As the harmony between a man and the nature is a part of ecological ethics it is considered in the wider prospect and above all as something that has a direct relation to ecology spirit formation [246, p. 165].

The ecological ethics thus is becoming a base for a new ecological paradigm. Ecological ethics is not an ethics of a separate person or a society founded on the ecological imperatives of the culture. Spirited with an ethical inclusiveness into the consciousness



it is a kind of universal ethics of a man's activity. Ethics that causes the mankind's development in general and relates not only to people, nature and setting relations between them but all the substantial that creates the complex existence system with different elements, various structures that shares between each other complex processes of scientific-technical, social-economical, political and cultural character.

The academician B. Lihachev considers the ecological culture as something derivative from ecological consciousness. It must be based on ecological knowledge, nature saving activity and moral esthetic feelings and emotions which occur after the communication with nature. The notion of ecological culture starts to be considered from the cultural positions. There are two processes combined – a man's education and its development as a social cultural individual [350, p. 125].

The new ecological paradigm is theoretical base of modern ecological activity. The main ideas – people obtaining exceptional abilities (culture, technologies) stay however ones among many other living beings – interdependent and included into the global ecosystem, biosphere; the man's activity is interwoven into the complicated net of cause-effect and regenerative connections of the nature tissue; the society is living in the final biophysical environment that puts serious limits onto its activity; exceptionality of a man as a cultured being does not cancel the biosphere laws. The opposite paradigm that rejects the upper listed limits has got the name «Paradigms of a human exceptionality».

Thus the ecological consciousness must include new ecological and ethical norms which are the components of the new ecological culture [270, p. 21].

The basis of the new morality, the new ecological philosophy, the new ecological paradigm must be: ideas of reasonable coexistence of biosphere and technosphere; planetary, universal approach to the Earth's social economical (above all energetic) problems' salvation; the idea of universalism – of global and cosmic



interdependence of all the processes; the idea of selflimitation necessity which is suggested by ecological laws and previous development experience; the idea of the optimal exploitation of the Earth's resources based on the implementation of the new resourcesaving and low-waste technologies and international global expertise estimation of these resources; the idea of saving and enlarging of biovariety; consolidation of the mankind under the motto of the objective knowledge, changing the science, especially ecology, into the managing instrument; total ecologisation of people's life, a shift from servotechnology (dangerous for ecology) to ecotechnology [62].

In the conclusion we must note that biological systems development does not have specific ideological concept for the ecosafe development of the worlds' society. Nowadays there is a fierce struggle between different directions which was started already by the members of the Rome club founded in 1968 in Rome from the initiate of an Italian social activist Aurelio Pachai.

On the basis of the analysis of the semantic field of biological systems management it becomes apparent that it is undeveloped and rather wonderful things can be observed there. First of all, there is a deep gap between the semantics of biologists and philosophers that study from different methodological positions the same processes of self-regulation of biological organisms and their formations. Second, the management that was considered to be the instrument of the market structures management now has been transformed into the management of people's communication process and their interaction with nature [331]. Third, the ideology of taking the decisions in this sphere has been becoming the principle of the humanocentrism, breaking of which explains the alienation of the nation from the state on the one hand and on the other hand – it is felt that a man as a system creating factor remains on its own both in the dimension of the biological life and in the social process. From the above said it is clear that it is one sided direction in the management of unbreakable systems and their interaction.



The philosophy of management answers the questions about the nature of management of biological systems in a following way – it is the management of biological organisms, i.e. of living matter (V. Vernadsky) [88]. Vernadsky wrote: «The idea that the phenomena of life can be explained by the existence of complex carbon compounds – living proteins, is irreversibly discredited by the set of empirical facts of Geochemistry... Living matter is the aggregation of all organisms» [172]. Therefore, the main means of influencing is a substance with the help of which the basic process of creation and reproduction of the organism – metabolism – is regulated.

V. Vernadsky repeatedly pointed out that living matter is inseparable from the biosphere; it is its function and also «one of the most powerful geochemical forces of our planet». He showed that living and nonliving in nature are inextricably linked by general history of the chemical elements, which was most clearly reflected in the formulated by him law of physical and chemical unity of living matter: all living matter of the Earth is a physico-chemical whole. This law shows that what is bad for one part of living matter cannot be harmless to the other part of it, or: bad for some types of malicious creatures – is also bad for others. Therefore, any physical and chemical agents, lethal to some organisms (e.g., persistent organic pollution), cannot exert adverse effects on other organisms.

The second consequence of this law is that within the global living things there is a complex relationship – in this geological period there exists (according to M. Reimers) as it is the only «net of life». Ruptures of this network, such as reducing the number of any species, make in it something like a hole – diminishing the stability of the whole system. At any particular time, according to the common in the nature principle of voting, this may be offset by other types – functional equivalents («substitutors»): with the decreasing number of any living species it is changed by the logical close species, often giving at the same time the dramatic increase of species population [418, p. 469].

V. Vernadsky, introducing the terms «living matter» and «osseous substance», believed that the living things are capable of evolutionary change, and the osseous (inert) ones, as opposed to the living things, exist without undergoing evolution. Living substance, according to V. Vernadsky, – is a set of organisms on the planet, which is characteristic of the total mass, specific chemical composition and energy.

Later, recognizing the interconnectedness of these processes, Vernadsky himself, basing on scientific evidence, abandoned the terminology that he had suggested before. Instead, to the scientific usage are introduced several other, somewhat more complete definitions: «biomass of the Earth», «live cover of the Earth» and others.

An important principle of development is the principle of heterogenesis: the development of living matter of the Earth lies in the fact that any populated area of the biosphere is always a complex confluence of elements, heterogeneous according to their spatial-temporal genesis [418, p. 472].

For us the indication of V. Vernadsky that the management of biological systems – is the management of plant and animal organisms [28, 89], is extremely important: it automatically directs us to analyze the management of ontogeny and phylogeny, biomes and biogenesis.

The essence of management of biological systems is in creation and reproduction of organisms, their physicality (state) and organizational structures – ontogeny, phylogeny, biomes and biogenesis. In living systems all management substrates are involved simultaneously: matter, energy and information, but the proportion of these efforts – the ratio of their size – can be significantly different [218, p. 89]. We remind you that the management changes the natural self-regulation there and then, where and when the preference is given to the information signal [218, p. 92].

The content of management of biological systems – is the management of the flow of information, substance and energy. The



means of control is the change of the environment, genetic engineering, food rationing, yoga exercises, and supply (feeding) of energy, such as electric current and so on. [218, p. 103]. To meet the needs of biological organisms, as it is known, substance, energy and information are used.

Forms of management of biological systems depend on the forms of life of organisms and the ability of their communities of people to process information flows according to the reflexive method. It is about the managing a biological man, but it is fundamentally different from managing an individual, influenced by social factors, such as of economic, social, political and ideological origin.

Typical representatives of community animals are polyps and sycamores. Each member of the colony of polyps has a mouth and stomach. All other organs (cloaca, for example) are common, belong to the entire colony. As I. Mechnikov stated, insects originally unite in the interests of individual survival: to repel enemy attacks or to warm themselves when it becomes cold. Subsequently, the community life of the insects such as bees, wasps, ants, termites, was formed around the rising of the younger generation.

Among vertebrates, the community life is even more complex. Fish and birds gather in communities (shoals, flocks) to facilitate the survival of the species, only in the face of external threat. The order is set by selecting those, who lead and those, who are led.

Somewhat different from this type are community mammals. Apes, for example, gather in families or small groups, where the hierarchy is observed and the leadership of the most important of all individuals is won by force. Here there is a shared concern for the survival of the entire pack.

Thus, we see that in nature without man and beyond man the complex regulatory interactions that lead to the formation of social structures based on self-organization are spontaneously carried out.



A somewhat different picture is observed at the population level. The special bodies of UN, OSCE, national, state and social movements are dealing with the subjects of management of biological systems development at the level of populations. They are involved in globalization and are actually controversial driving force of global development. Among them two lines that oppose one another: globalists and anti-globalists, were formed.

Globalists suggest the formation of a single economic area under the auspices of the U.S.A. They, being the advocates of market relations eternity, believe that globalism is a movement of the modern world and the overall integrity, when an effective economic development of any country is impossible without the development of the other.

The ideological basis of globalism is the diagram of Wallerstein, according to which the world consists of a developed core – the West, buffer semi- periphery of western satellites and the periphery – of the third world. This is the social structure of the future of humanity. In addition, according to the Club of Rome, the decrease of the world's population due to lack of natural resources is predicted.

According to some scholars and journalists (V. Mezhujev, A. Klimenko, E. Sapir, A. Sentyabrev etc.), Globalism includes transnationalization of economic activity, the formation of a single economic and communication area and enhancement of the role of parastatal and supranational regulators of the World Economy and International relations. Economists distinguish several positive aspects of globalism: stimulation of production increase due to competition, market expansion, extension of specialization and the international division of labor; increasing of labour productivity due to rationalization of production, dissemination of advanced techniques and competitive pressure, saving resources by reducing production costs and lowering prices; the possibility of exclusion major military conflicts between the countries [190].

From this perspective, such phenomenon of the modern world is good for the human community and it is positively perceived by it.



The analysis of the global economy development shows that the positive effect of globalism is felt only by a narrow range of most developed countries. The rest of the international community is also experiencing its negative effects to this or that extent.

First of all, it concerns the potential contradictions in the socio-economic sphere that are fraught with antagonistic character. One can cite, inter alia, the following data: the formation of a single economic and communication area covers only 20% of the world's population that consumes 86% of gross world product. Poverty and social degradation generate outrage and protests among the population, until the emergence of large-scale terrorism and armed conflicts.

The second most important controversy generated by globalism is of civilization character: the spread of technological advances and human values of the West to the rest of the world is opposed to the East with its original ideological, philosophical, spiritual and religious values. This contradiction with the unfair distribution of benefits from globalism raises the risk of conflict between rich and poor regions, particularly in alignment of so-called «Islamic arc of instability».

The third contradiction is the presence of unresolved issues in the relationship between the rich countries-leaders and poor developing countries. This primarily applies to raw materials, mass immigration, brain and skilled personnel drain.

Fourth contradiction of globalism lies in confrontation of transnational processes to absolute character of state sovereignty. This is because the development of globalism process requires not only cooperation between states but also a certain limitation of their sovereignty. Some experts (V. Mikheyev, I. Ivanov) consider this contradiction as almost the «fundamental contradiction of modern age». Hence the concepts of «limited sovereignty» and «humanitarian intervention» appeared. What this all has led to, is really clearly seen from the fact of NATO states aggression against Yugoslavia and the disaster of 400000 of Serb population in Kosovo. To this we must add the tragic events at the end of the

2011–2012 in North Africa, when the states collapsed and rivers of human blood were spilled.

These contradictions of globalizm pose a serious threat to stabilization of the situation in the world. They, on the one hand, lead to deterioration of international relations, and, on the other hand, – to the emergence of anti-globalism, resulting in the most common forms, such as protest actions and terrorism.

Ironically social movements (the movement of «green» in the European area and in Ukraine, its initiative and importance; the activity of «Green Party of Ukraine», the activity of «Environmental League of Ukraine» and its youth component; Ecological Association «Green World», «Greenpeace – Ukraine», etc.) are more active and constructive because they attach special importance to grounding of modern interactive models of environmental education, enlightenment and education of the individual, the determination of the role of civil initiatives in the implementation of environmental paradigm in real life practice and education of the individual.

The alternative of ecological ideology, thought, consciousness, culture and activities is anti-globalizm as a social movement of the late XXth and early XXIst centuries. It should be emphasized that the anti-globalizm association on a principle of resistance to the common enemy is rather unstable in the long-term view. In antiglobalizm there is yet a lack of two major components, which could make it an independent political force in the world – a common ideology and a single governing body. Creation of both, obviously, is an important task of all anti-globalizm organizations, if they are going to seriously confront neoliberal globalization. «Today it is clear that at this stage the anti-globalizm movement is actively attempted to «be ridden»: someone, for selfish reasons of petty politicking careerism, someone – for closer coordination of joint actions, someone attempting to collapse the movement that is born, or to give it an explicit marginal look» [395, p. 138] .



The analysis of current state of anti-globalism movement allows us to offer a number of models, scenarios of its development:

1) antiglobalism movement based on the full deployment of offensive potential is the axis of the forces systematically opposed to the ideology and practice of globalization;

2) transformation of antiglobalism to subsystem, the factor of prohibition, versus international political society, carrying on a consistent struggle in the global society against the maximum wideness, democratic character and effectiveness of control over globalization processes;

3) inclusion of anti-globalization movement (or some of its sectors) in the institutions of global political power and establishment of new dominant of the world development [8, 101, 395].

According to M. Shepelev an alternative globalism needs political will, capable of becoming the spring of world opposition to the global neototalitarianism, united on a common ideological platform. The success of alterglobalism is possible only if the union of social movement for global democracy with the countries that have become the victims of neoliberal globalization and have been left without the chance in to overcome backwardness the present circumstances. This requires the coordinated policy of self-defense from hegemony and to create conditions for open dialogue between cultures, to create international alliances, based on a new type of international cooperation of the countries with different levels of development, to promote the cooperation of the periphery countries and antyhegemony forces in the post-industrial world. However, the main success factor of alterglobalism is the existence of the countries with the great cultural, industrial, and power potential that can take on the role of an alterglobalism leader and promote the rebuilding of destroyed balance in the world by its global activity. New wave of orientalation gives a chance to realize such historic opportunity [527, p. 38].

Legitimizing power of social movements is based on the authenticity of the certificates about the actions that are revealing the «offenders» with the reliable information. If all is well, global social movements affect on cosmopolitan morality and reform with the experimental forestalling. They inform world public opinion about far from reality ideas, check those ideas by matching the reality and also give rights of voting to the citizens and advocates for civil rights, – rightly notes U. Beck [36, p. 121].

4.2. Morphological features of biological systems management

The task of this subchapter is to recreate the morphological features of the system of biological systems management. For any researcher, who tries to study the methods of complex cellular, molecular, supramolecular, supra-cellular and supraorganism systems management, it is necessary to understand that a system is a range of variable values connected to each other by direct and indirect coupling [224].

Under any effect onto the system the hierarchy of variables changes, as well as the forces and directions of links between the variables. The system shows a definite total respond to a definite action. We want to remind here that cybernetics does not study the process of management systems generation but only their functioning.

To study any system, it is necessary to build its model. A model of a system is an enumeration of essential variables (there are much fewer of them than any other variable values in a real system), but if to unite them with required direct and regenerative correlations, this unity of essential variables will give the same respond to the same action as a real system.



A researcher of biological systems management, as well as a system biologist, should look at nature not with the eyes of animals and primitive people (they see only objects), but with the eyes that can see the systems that include variable values of the objects of live world, ossified nature, space, climate, weather etc. Just like Ch. Darwin looked at evolution.

The structure of the biota of the living is too complex, because it is multilevel, that is why the morphology of biological systems management is also very complex. To understand it we should do a special research. Apart from emergency features that appear on higher levels of organization, new levels of the biological systems management appear at each new level of organization. Below you can see the levels of regulations of live processes on different levels of biological organizations. They include: a) systems of inter-cellular regulations (level of core is (6) and of cytoplasm (5)); b) systems of organism regulation (6); c) systems of the level «organism – environment» (5); d) systems of population level of regulation (7); e) systems of phytocenosis level of regulation (3). As we see, the total number of levels of regulations is 32 [223].

In the future this number will grow, of course, because new systems of regulations will be discovered. Due to these particular levels of regulation the emergency features appear on different levels of life organization. The higher levels of regulation often dominate the lower ones. For example, the wheat stem that stands separately is able to yield up to 3000 seeds. In phytocenosis (in the field) in the conditions of auto-competition it usually gives 30–40 seeds. Competition can lower the expression of any structural gene of a plant by 50–100 times.

Following the above material, with the help of the rudimentation principle, we will simplify a bit the management object structure and will build a heuristic model but the one that is able to be applied to the studies of any level of a biological system. We have to single out two levels of management in biological systems management: a) organism level and b) population level.

Organized living organisms are found in a state of natural habitats, 'communities', colonies, shoals, troops, herds [218]. There is a term 'community', which is often used in ecology. Its meaning is ambiguous. It means both: the unity of connected organisms of different kinds (synonym of biocenosis) and analogical unity of only vegetative (phytocenosis, vegetative community), animal (zoocenosis) organisms or microbe population (microbiocenosis) [97, p. 7].

Due to these qualitative surveys, there is a suggestion that when a biological system that consists of organic molecules, is «born», it will get under the governance of a definite non-material system, which uses weak interactions (weak forces) as a mechanism of management.

«Non materiality» of this system manifests itself in the fact that it has none of the known 'features' of substance, and so it does not interact with matter, it is orthogonal to it. On the other hand, as any interaction, including the weak one, is just a distortion of space in its own sphere that leads to the changes of evolutionary solutions of nonlinear equations of space, so this 'non material system' does not need to have material characteristics. It can simply distort coordinates that correspond to weak interaction, in order to manage the movement of DNA molecules. As physic vacuum is a state with the highest kinetic energy, so, as a result of management of biological system molecules, the law of energy saving will work alright. Let's name an object that gets management of biological system a homeostat that has a special «bioprogram». The bioprogram is analogous to a computer program, according to which a biological system develops and functions from its birth to death. Evidently, the «bioprogram» can also use other fields for its purposes, but it turns out that a weak interaction may be more appropriate for the tasks set for «bioprogram».

Thus, the human organism as a biological system consists of two parts. The first one is a material part – the object of management, and the second one is a homeostat with the



«bioprogram» – the subject of management that manages the material part using weak and partially electromagnetic interactions. We should pay attention to the fact that the morphology of biological systems – live organisms – is rather concealed from the researchers. The subject and the object of management are in one whole – a biological organism that has a biological body, a body of control and a program of own development, alone and simultaneously.

A direct analogy of a biological system is a cell phone. The phone itself is a «material part» – the same as a unicellular biological system appears if to look at it under the microscope.

DNA or the «inner program» of a biological system is analogous to SIM-card that contains the contract specifications and all identification parameters of a user. A program coded in microschemes that manages functions of a cell phone is an analogy to «bioprogram». The accumulator, which performs the energetic maintenance of a cell phone, is analogous to a low energy nuclear reaction that can be used by a bioprogram for successful functioning.

Management of biological systems is done due to the links existence [97, p. 7–8]. The latter are divided into the direct ones and the opposite ones, which fact is a positive feature for us because these organs are present in all three phenomena. Direct link is a link when one element (A) influences another one (B) without relative reaction. An example of such connection in biosphere can be the action of a wood layer of a forest to a plant that occasionally grew there or the action of the sun to the Earth's processes. With the opposite link, element B responds to element A's action.

Opposite links can be positive and negative. They both play an essential role in ecological processes and phenomena. A positive opposite link leads to intensifying of a process in one direction. For example, the swamping of a territory after cutting the forest may serve a good pattern. Taking away the forest cover and thickening of soil usually lead to water accumulation on its surface. It gives a



chance to plants-water accumulators to settle here, for example, sphagnous moss, which contains 25–330 times more water than its body. The process starts its action in one direction: increase of moisturizing – oxygen depletion – deceleration of plants remnants dissolution – accumulation of turf – further strengthening of swamping.

A negative opposite link acts so that in respond to a strengthening of element A's action the opposite by direction power of element B's action gets intensified. Such link allows keeping a system in a state of stable dynamic balance. It is the most wide spread and important type of links in natural systems. They are, first of all, the basis of permanence and stability of ecosystems. One of the negative manifestations of human activity in nature is connected with the break of these links that can lead to destruction of ecosystems or their transmission into different state [97, p. 7–9].

Homeostatic model of genetic apparatus work is presented in scientific literature [436, p. 45–84]. It shows genetic models of a gene, cell, tissue (of organs), of biological organism as a whole and of population as homeostat. It is stated that one of the most important characteristics of the XX century is a breakthrough in knowledge about structural mechanisms of restoration and transmission of biological information in inheritance [436, p. 45]. Homeostat in multicellular live systems – unlike a material unit of life – a cell, is an informative unit of life, i.e. only in its presence the circle of neolife is provided.

In biology a system of management is a material essence, live system, unity of cooperating elements (parts) that has ins and outs for exchange of information, substance and energy with the environment. All live systems are probabilistic targeted non-linear systems of automatic management. Abstract systems (models of real systems) may be of any kind, in particular, static and/or linear, and/or deterministic systems [408].

Our ideas about live systems (models of systems) are based on a statement that any system of management consists of 2 main



cooperating parts: a section that manages, i.e. regulator, and an object of management. As O. Bogdanov writes, «Oftentimes a word keeps organizing idea there, where fragmented thinking of a person has lost it completely. For example, organizing role of religion in social life slips out from routine small-scale consciousness of our epoch. Though it is the word that rather clearly points to this role, whether it comes from «religare» (latin – connect), or from «relegere» (gather). In the same way, if not content then the usage of a word 'soul' in Russian and other related languages if to follow it attentively, gives the answer to one of the most secret fields of science and philosophy. It is often used as 'organizer' or 'organizing principle' of some business or society...» [65, p. 93].

Management of biological systems has intellectual character, because everything live has its own soul, the organ of which, according to H. Ebbinghaus, is the brain of biological organism [534, p. 35]. And if not to be principal about denial of soul existence in biological organisms, then it manifests itself as 'organic unity, live interlacing of mutually connected, penetrating into one another functions» [534, p. 44]. And, as H. Ebbinghaus wrote about this issue, «with the help of neural system every organ joins the others, forming one self-consistent whole; thus a simple aggregate turns into a system» [534, p. 41].

Soul with its inner life is not seen through the whole reality of corporeal form. According to G. Hegel, «The same flaw appears in higher sphere, in spiritual world and its organisms considered in their actual biosis. The more important and meaningful these spiritual creations are, the more relating means this only goal, which inspires this unity and makes up its inner soul, needs. In actual reality these means prove to be purposeful organs and everything that is going on is done by means of will. Each part of such organism as a country and a family, i.e. each separate individual, shows will and exists in connection with other members of the same organism, but only inner soul of this connection, freedom and mind of one will do not step on the arena of reality and do not reveal in each part as one and united inner animation» [114, 155].

In available literature we can find only most general characteristics of the intellect that are always pointed to one – human soul. For example G. Hegel wrote on this issue: «So far we have considered special reality in its closed peculiarity as something positive. But this independence is to be objected in a live creature, and only an ideal spiritual unity inside a corporeal organism can keep strength to correlate positively with its own self. Soul must be taken as this ideality, affirmative in its denial. So, if there is this particular soul in a body, in that case this particular phenomenon will have affirmative character. Soul, actually, shows itself as a power counteracting independent embodiment of members, but it itself creates them because it contains in itself something that is externally shown in forms and members as inner and ideal principle. Thus, the external has this particular internal with its positive content; the external that remains only external would be nothing else but abstraction and one-sidedness» [114, 131].

The problem of intellect has been considered, as it is well-known, in irrational manner by A. Schopenhauer, H. Bergson, E. Hartman, W. M. Wundt and other researchers. It was analyzed under biological position by H. Spencer and representatives of pragmatism.

As a problem of experimental psychology the problem of intellect was raised only at the end of the XIXth century by H. Ebbinghaus. Nature of intellect according to J. Piaget is dual, – biological and logical. It is the highest form of adaptation to environment because in it the immediate and momentous adaptations are surmounted by organizing stable steric structures and temporary logical ones. According to the content, the intellect as activity of structuration is a system of vital active operations of logic.

That is why the intellect is considered as a unity of all cognitive functions of the individual. A form of its functioning is pulsation of above mentioned substructures and its products are highly energetic fields of intellectual energy – some kind of plasma. We see it today



on the screens of modern devices in the form of 'fiery pictures' – emanation of microwave diapason. Observed externally, this energetic reaction looks like hologram that flashes in human brain. Isn't it the reason, why Plato says that soul is 'the principle of all kinds of movement', 'the oldest and the most divine of all things'? [See: 363, p. 272].

A principally different case is the management of biological organisms populations. The populations are defined as relatively isolated parts of separate kinds, within the ambit of which breeding and information transmission are more possible than between different populations of this species [97, p. 47]. Most important factor of the populations isolating within the species is differences of inhabitancy conditions.

Let's have a look at their features on the example of the most complex system – the planet community of people that has got total control over the planet ambient and today it tries to conquer the near space. This structure has absolutely different configuration of a biological body and organs of management than organismic level but it has a range of attributive features of immaterial subject, for example, soul, collective mind, collective psyche and memory, collective activity, collective organs of management, self-regulation organ etc. [81].

The model of homeostat of the planet community and its features is done by Yu. Gorsky and presented in monographies, the numerous publications of the study group seminar sittings in homeostatics, on the conferences, international symposiums, and congresses [See: 133, p. 63].

Human community has natural homeostat, i.e. the organ that regulates its life activity. Yu. Gorsky's works prove that the higher the live species is on evolutionary ladder, the more the importance of individual experience in forming of reaction to a change of life situation grows. This phenomenon got a name of signal heredity [253].



Signaling heredity in human society is getting exclusive significance. On its base the following vital functions are formed: 1) second signal system (speech signals); 2) behavioral activity directed to the change of the ambient and activity, which is indirect due to transformed elements of the environment (tools of production). In the final analysis, due to these modified opportunities, human population created specific inheritable structure of non-genetic character – culture.

The phenomenon of human population lays in qualitatively new ways, as compared to the populations of higher animals, collective information processing and high rates of information processing by the individual that lives in cultural environment. Generally, a human body as homeostat does not differ biostructurally from all other higher animals. But the combination of two above mentioned factors made a considerable advantage in survival owing to purposeful alteration of environment to match with the measures of norms of organism reactions. For the purposeful alteration of environment and creation of production tools it is necessary to arrange such flow of information, which would reflect the properties of an object that had been not substantial for survival before.

The change of the content of information flow from the environment became possible due to the change of the properties of the subject that was shown in a change of geometry of a body in its interaction with production tools (stone, cane, axe, knife, device, systems of tools/devices...). Each animal assimilates into the external world by law of its body structure, so it has definite features, informatively complemented for interaction with a narrow part of external environment.

A person, changing production tools, changes ways of interaction in a wide diapason within the inhabitancy and beyond it, and this broadens its possibilities in acceptance of information, i.e. a new nonbiological means of change of information filters at the entry in his homeostat has appeared. This feature of individuals evolves along with the level of accumulation of nonbiological

inheritance in such socio-cultural environment, where rather deep division of individuals according to their specific character of interaction with the environment has occurred.

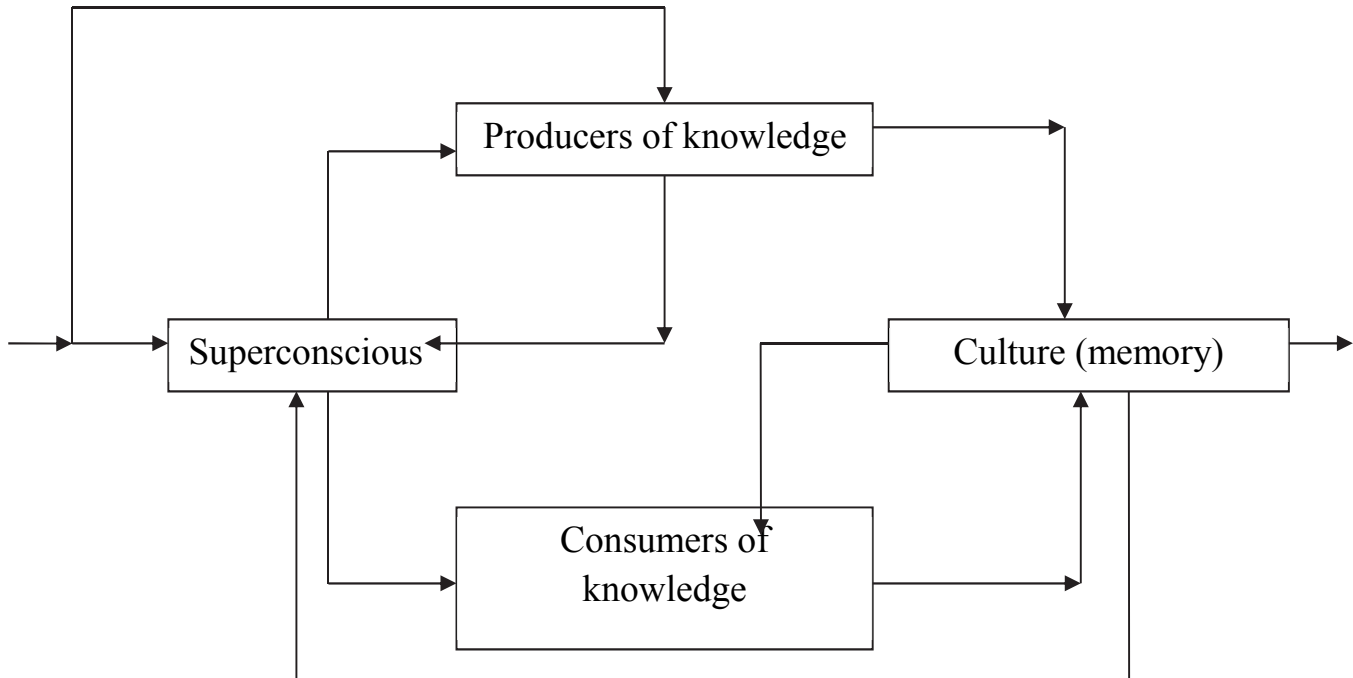


Fig. 4.2.1. Model of human population information homeostat

The whole of all received and current knowledge in human population means consciousness of a species as a symmetric homeostat. In this aspect the whole information flow about the state of environment that circulates in a species homeostat relative to an individual is called superconsciousness. As compared with individual consciousness, over consciousness has imaginary mystic features and manifests itself in human psyche in the form of intuition.

For understanding the functioning mechanisms and solving the problems of using the populations, knowledge about their structure is very important.

We distinguish gender, age, territory and other kinds of structure [97, p. 48]. In theoretical and applied plans the most important data is the one about the age structure, under which the correlation of individuals (often united in groups) of different age is understood.



Usually, the most viable are the populations where the individuals of different age are given relatively evenly. Such populations are called normal. If more aged individuals in a population prevail, it proves explicitly the presence in its existence of negative features, which impair reproductive functions. Such populations are considered as regressive or as those that extinct. Urgent actions to reveal reasons of such a state and to eliminate them are necessary. Populations represented mainly by young individuals are considered as those that are embedded or invasive.

Their viability does not arouse worries, but there is a high chance of increase of excessive quantity of individuals because in such populations no trophic and other relations have formed. It is especially dangerous if such populations are represented by species that were absent here before. In such case the populations usually find and take a free ecological niche and realize their potential of reproduction, increasing its number intensively.

So the reflection of live systems management systems morphology in literature is a problem because there is no the single best type of organizing structure and one right way of personnel management, and it is better not to manage people at all. «Today, finally, it is clear that such notion as one correct organizing structure does not exist. There are just different kinds of structures; each of them has its strong and weak points. It is evident that organizing structure is not an end in itself. It is a *tool* with the help of which one can increase the efficiency of employees work. In this case any organizational structure is good for solving the definite tasks in the definite conditions at the definite time» [158, p. 25].

So the problem here is that in this area it is necessary to predict not only people management but other alive systems management too, to which we need to include the biota of all live and they need to form ideas, on the basis of which it is necessary to regulate their behavior and development in ecosphere of the Future.

4.3. Functional aspect of the planet community development management during the XXI-st century

During the evolution people have accumulated some particular knowledge about the mechanism of biological system management that lives according to F. Redi's principle (1626–1698), «all alive comes from alive». Having learned how to change the environment, people started using this way as the stick and the carrot policy. Changes in the external environment mildly influence the morphology of a managed element making and provoking it to definite reactions in respond. This method of management is called reflexive [157]. Reflexive method is stochastic because it is impossible to fully predict a reaction to respond to it.

For deep study of biological systems management problems, it is necessary to know their kinds in a discourse of general statements of the theory of systems. Usually there are distinguished three kinds of systems: 1) isolated systems that do not exchange with the neighboring ones neither material nor energy; 2) closed systems that exchange with neighbouring ones energy but not material (for example, a spaceship); 3) open systems that exchange with neighboring ones material and energy. Practically all natural (ecological) systems relate to the open type [97, p. 51–52].

Biological systems as open structures have a range of attributive characteristics that distinguish them from technical systems and make them closer to social ones. A universal feature of ecosystems is their emergencyness (appearance of something new) that means that features of the system as a whole is not just a sum of features that is made of its parts or elements. For example, one tree does not make a forest; because it does not make a definite environment (ground, hydrological, meteorological one etc.) and inherent in forest connections of different cells that condition a new quality. Underestimation of the emergental



can lead to big miscalculations at interfering of a person to the life of ecosystems or during the construction of the systems to fulfill certain goals. For example, agricultural fields (agrocenoses) have a low factor of emergency and are characterized by a very low ability of self-regulation and resistance. Due to exiguity of the species structure of organisms, they have utterly poor interrelations, big possibility of intensive reproduction of separate unwanted species (weeds, pests).

Biosphere is a self-regulated system, for which, as V. Vernadsky states, organization is characteristic. Now this feature we call homeostat, understanding under this the ability to return to an initial state, put down disturbances that appear due to activating certain mechanisms. Homeostatic mechanisms are connected mainly with live substance, its properties and functions considered above. Biosphere during its history has gone through such upheavals that were significant in the scale, and managed them (volcano eruptions, meeting with asteroids, earthquakes, mountain creation etc.) due to the action of homeostatic mechanisms and especially due to the principle that is called now le chatelier brown: acting on the system of forces that disturb its state of firm stability, the latter is shifted in the direction where effect of this influence is weakened.

Biosphere is a system characterized by a big variety. For any natural system the variety is one of the most important features [97, p. 7–9]. It is connected with the possibility of doubling, protection, and replacement of the cells (for example, at the level of species or population), level of complexity and strength of food and other relations. That is why variety is considered as main condition of stability of any ecosystem and biosphere in general. This feature is so universal that it is formulated as a law (its author is W.R. Ashbi).

The characteristics of functioning and development of a phenomenon of the biological systems management. Alive systems have one principal peculiarity that lies in a presence in their organisms a complex system of inner mechanisms of acception, transformation of management signals from the outside and making decision of their own. Intelligent live creatures do it on the level of



consciousness and self-consciousness, and primitive live creatures (protozoa) – on the level of instincts and reactions. Thus, for instance, a person manages his own behavior basing on a whole system of inner organism mechanisms that are described in details by V. Bekh in the functional model of human personality [53].

V. Popov, I. Krainiuchenko, E. Trifonov, V. Druzhinin, D. Kontorov and other researchers who studied management of live systems suggest the elaborated by them principles of management and present the characteristics of reflexive management [157; 357; 376].

Let's point out that a discourse of this kind of management has been being formed yet and it is far from completeness, but its language and content make it totally different from what we use today in a practice of groups management, especially children and teenagers. So, for example, V. Popov and I. Krainiuchenko, studying the mechanism of management of complex (live) systems, write the following: «To manage is to encourage a managed element to necessary action. If a managed element is a person, animal or a group, then management gets special peculiarity. Complex systems, to which a person relates, have a possibility to choose, change their behavior depending on the conditions. People do not have buttons, levers, and pedals, with the help of which they can be forced to do these or those actions. That is how a person differs from a machine. But a person has needs, goals and desires to satisfy them. If to have a possibility to change internal and external environment of a person, then these actions will cause definite behavior, directed either to the removal of the non-desired action (principle of le chatelier brown – reactions to external influence are determined) or to its perseverance (if change is taken as a desired one). The direct action to a person's morphology (beating, torturing, execution etc.), purposed to force him/her to fulfill needed actions, is well-known in the history. This way of management is inherited by us from animal ancestors, who poorly coped with the tools of «economic» action» [357].

During the evolution, mankind has got other socially less dangerous ways of action, management. Having learned how to change the environment, people started using this method as the stick and the carrot policy. Changes in the environment mildly influence the morphology of a managed element, motivating and provoking it to definite reactions in respond. This method of management is called reflexive [157]. Reflexive method is stochastic because it is impossible to fully predict the reaction in respond to it. Exact management requires good knowledge about the object of management and information processes that take place in it [402].

A person, society and other biological objects are open, non-linear systems, i.e. they consume resources and emit metabolites. From this point, the most effective action onto society can be done with the help of regulation of the flows of the resources and metabolites. Blocking and distributing the resources, it is possible to provoke the object of management to desired actions for a system that manages it. The most important modern resource is money.

In ancient times there were more kinds of resources, because there was natural economy. Evidently, the action onto the most important irreplaceable resource allows the most effective management. Under resource we understand raw materials, territories, 'spiritual' resources (pleasure) and time. Resource is something that satisfies needs and allows functioning in the more optimal way. The more the behavior of an object is determined by reflexes (true reactions) the easier is their management. A person has both the reflectory and 'conscious' behavior. 'Conscious' behavior is less predictive.

As conclusions, V. Popov and I. Krainiuchenko give the characteristic of live systems management in the following way [357, p. 74]:

1. Action (management) onto complex (live) systems is possible only with the help of provoking the managed systems to necessary action. It is called a reflexive management.



2. Reflexive management of a certain complex system can be done by changing the environment, regulating the resources and metabolites. Management of biosphere development can be only a reflection, and as the environment for it is the person, the earth core and the space. The change of the human factor is the most effective way of influencing the biosphere.

3. Among all subsystems the most precious is a subsystem that manages because the absence of management will lead to collapse of any complex system.

4. Emergence of management is a result of evolution differentiation and of the specialization of complex system elements.

5. Management limits the variety of states of a system.

6. Main function of management in live systems is regeneration of worn elements purposed to support homeostasis and to choose the ways of evolution.

7. Reflex of subordination is set genetically in all higher live creatures (gregarious). It makes management and upbringing easier. In human systems the management allows the presence of power.

8. Systems of management are hierarchical. Higher levels are oriented to management of environment. Lower levels manage their own homeostasis. If 'lower' levels can't cope with their functions they are added by 'higher' ones. They themselves offer universal scheme of live systems management that is applicable for functioning both: in ontogenesis and in phylogenesis.

Thus, on the basis of a very general overview of a discourse of management of biological systems it is clear that we do not cope with the management of biological systems. A person as a representative of biota of live does not have his/her own needs and opportunities, the system of management, adapted to his/her state. It is thrown a lasso on – of either technical or productive purpose. And it seems that exactly philosophy of management, applied on time, can give sense and provide enough dynamics to formation of the discourse of biological systems management. There is almost nothing published about the rules and laws of management of live

systems in biocenosis, biogenesis, ontogenesis and phylogenesis by demographers, social philosophers and theorists of management.

A great interest is arisen by so called «reflexive management» that is virtually the philosophy of biological systems management. Under the management of reflection we understand the art of influence on a person with the help of information messages (management without feedback) in broader sense – a specific method of social control over individuals [134, p. 4].

The peculiarity of reflexive management lies in the fact that some simplified model of another subject is built, on its basis some message is sent to the subject and at the same time some the information from this message is put into a built model. Then there is no need in feedback because it is possible to obtain certain information about the subject only because it was sent a message organized in a certain way.

«It is a very economical way to manage other subjects because feedback is a very expensive thing. To collect such information one needs data equipment to process it etc. Using the method of reflexive management main expenses go on models construction that give the possibility to predict the behavior of a subject after it gets this or that information message. Another advantage of reflexive management is obvious in the fact that sending some message, we do not open our system of management for possibilities of information action from the side of the opponent» [250]. Exactly in this sense the reflexive management as art of people's manipulation has been used by military officers during the whole history of human society, when a well-organized information action helped to win a fight with little efforts.

Reflexive management as a specific method of social control has been used since 1960s, when a concept of information war started to form. The peculiarity of the problem lies in the fact that in this concept the generation of information actions results not from natural human intuition but from a special model of a managed subject. It was connected with a little efficiency of the psychological



models built in that time on traditional behavioral notions (which consider not consciousness but behavior, as the aggregate of reactions to the effect of environment, to be the subject of psychology). The model of a subject, in terms of reflexive approach, as it was predicted, will reflect not only its behavior in the area of purely physiological reactions to the stimuli, but also its ability to identify itself together with other subjects. With the building of such models of reflections the researches actually started. The first really working models and technologies of reflexive management appeared at the end of 1970s. The subject there was already considered as 'something' that has features related to which such notions as 'consciousness', 'justice', 'freedom of will' etc. can be used.

According to S. Kara-Murza's opinion, Americans have made a scientific and intellectual feat. During a very short term they have created new technique of reflexive management of society. It has been built for thousand years in other societies, in European culture it had in its basis the recognized generalizing philosophical works, for example, «The Politics» by Aristotle and «The Republic» by Plato. In the USA it was created on a bare place by a pure scientific and engineer method. G. Markuze interprets this huge change as follows: «Today the conquest of a human being is perpetuated and broadened not only by technique tools but as the technique, which creates even bigger base for full legitimating of a political power and its expansion that covers all spheres of culture» [See: 201, p. 35]. Conquest not with the help of technique but as a technique!

But quite often a real power is considered that one that does not have an element of violence in it self. Violence is coercion, ownership but not a real power. Violence, as T. Boll says, is not a power but lack of it, it is pseudo power [72]. And the most evident condition of efficiency of power seems to be the combination of the elements of coercion and influence. «Effective coercion cannot be attained by only one tool – either by violence or by ideology, – as M. Foucault wrote, – coercion can be direct, physical, but yet shall



not be violent, it may be calculated, organized, elaborated, and yet have physical nature» [499, p. 34–35].

Thus, we should speak about optimum combination of the ways of influence and the ways of coercion. S. Moskovichi also writes about it: on the one hand – it is the violence in different forms, on the other hand – it is the legitimacy that vindicates and secures supremacy. Inner belief that adds to external violence is a formula of power legitimacy [306, p. 2-83; 158, p. 25].

The survey from this point of view of the social insects' behavior, especially of the most organized of them: the honey bees and ants, shows the presence of germs of a reasonable activity that is shown in an ability to generalize, synthesize. In such a case, adequate to reality notion 'reasonable activity' is given by a famous Soviet scientist L. Krushinsky that allows to avoid treating as fully identical of those who differ considerably by extent of complexity of mind processes in animals and people [234].

Experiments prove the ability of social insects to act reasonably: bees and ants can create impression of «alternative situation», have an impressive ability to so-called invariant recognition of figures and objects, i.e. the bees and the ants can create elementary abstract ideas about triangle, circle, square, quantity of the colors (in amount of two-three) or of the objects. Only highly organized spinal animals are able to do this. In modern zoopsychology a scheme of behavior classification is often used, which distinguishes five types of adaptive reactions: taxis, reflexes, instincts, reasonable activity that includes insight and different forms of learning. In addition to the behavior of social insects, it becomes evident that the most part in it are taken by instincts and reasonable activity [See: 92; 365].

This is too simplified idea about the mechanism of making decisions by live systems, by a human being in particular, because the whole biological organism as a whole takes part in this operation. The difficulty of the analysis is determined by a multi-level structure of a human consciousness that manifests itself in a different way at each level: a) at unconscious level – as genetically inherited instinct from



ancestors; b) at sensual level – as emotional states; c) at intellectual level – as comprehended values, esthetic categories.

Depending on this differentiation at each of these levels there is its own organ (apparatus) and mechanism of data processing: a) at unconscious level – energetic mechanism that processes information into energy and vice versa codes back the sense which carries energetic impulse; b) at sensual level – psychological mechanism that processes genetic (irrational) information; c) at rational (intellectual) level – mechanism of socialization that processes social (rational) information.

Psychological mechanism 'works' on the basis of psychofractals that come from psychosphere and nourish the subconsciousness of a personality [155]. Its main function in the discourse of our research is in harmonization of personality's subconsciousness and of the sphere of collective subconscious society (socium). Knowledge about the unconscious was called until recently 'shaman' and put into the reserve of 'esoteric', i.e. closed, experimentally not proven and even harmful knowledge. In spite of the fact that this knowledge was related firstly to the sphere of human spirituality, thin matters and strong powers that were hidden in irrational and subconscious part of a psyche world of a person and mankind. Religion can also be related to spirituality but the religious spirituality needs faith, it is based on it and needs nothing but faith. In the paradigm of archetypal management the religious and scientific postulates long for unity.

Mechanism of socialization functions in a horizon of personality's consciousness. Personality and society have, as shown above, specific mechanisms of entrance to the cooperation and use them very well. The main function of this mechanism lies in harmonization of consciousness of a personality and society on the basis of aesthetic ideal. Aesthetic ideal in itself that was given above as normative and value imperative, or the absolute, cannot 'do anything'; so that the dictated by its sense self-change would happen, it should join the possibilities of a system – organism of a

person (it is pure encouragement). The combination of the absolute and possibilities the systems find automatically: it is a simple realization of objective relationship predicted between the absolute and these possibilities.

The absolute in such case due its own sense has a right of influence to all abilities of a person. Such unity of the features of necessity, required self-change, causes aesthetic ideal, with the abilities of human personality it arouses self-sufficient complex of its self-recreation (in this notion both: stimulating and executive cell of the activity are presented).

Now we have approached an important moment, the essence of which is that the presence of two types of influence mechanism of an aesthetic ideal on the formation of a personality causes in its structure the sharp contradictions that must be withdrawn only by the third, much deeper mechanism that a live sensible creature obtains – a mechanism of inner struggle of contradictions that is known to us as a mechanism of experience. K. Marx, explaining such transitions, often used synthetic categories-notions: 'practical-spiritual' understanding of a reality, 'sensual-oversensual' relating to the features of a product, 'essential unity of nature and society' relating to a person.

We do not have own concept about it, but there are working hypotheses, working on which in future will probably give positive results. Firstly, as 'chronotop' in a structure of a personality helps us to understand mutual transitions between sensible and intelligible matters, so it is necessary to study its functions in a person's organism in more detail. The peculiarity of a chronotop lies, let's come back to this notion again, in the fact that it combines non-combined from the first glance phenomena, such as: space-time, in physical sense of the word, corporal limits with infinity of time and space, i.e. with eternity and with endlessness. That is why it has both, Physical and Semantic Universes. It is, as M. Kagan states, the organ mediating their interrelations [See: 192, p. 114].



The dependent on density of the dynamics of populations is provided by biotic factors. They are called regulating [97, p. 7–9]. For example, today it is clear that the main thing in genomes is not the structural genes but the regulating ones. A human being and a chimpanzee have 99, 4% of the same structural genes. All our differences with these monkeys are 99% determined by genes-regulators.

In general the action of regulating factors can be considered at the level of interspecific and interpopulational relationships of organisms. They 'work' according to a principle of negative feedback: the more significant the quantity is the stronger the mechanisms which cause its decrease; and vice versa – at the small quantity the strength of these mechanisms weakens and the conditions are formed for fuller realization of biotic potential. Factors of such type lie in the basis of populational homeostasis that provides the support of quantity in certain measures of values. The relationships of the predator-prey type organisms, in particular, belong to the number of regulating factors.

The same relationships of the 'predator-prey' type mentioned above relate to interspecific mechanisms of homeostasis. The 'parasite-owner' relationships work in the same plan. Under high quantity the conditions are created for increase of parasites and parasite diseases as a result of overcrowding and as a result of weakening of organisms. Competition, severity of which depends directly on the number of organisms, also belongs to interspecific mechanisms.

Competition lies in the basis of interpopulational homeostasis too. It can manifest itself in the drastic and gentler forms. Drastic forms usually end with the death of a part of the individuals. In the plant kingdom it manifests itself in the phenomena of so-called self-liquefaction of phytocenoses. In the animal kingdom the result of

The vigorous interspecific competition often manifests itself in the form of cannibalism (eating same individuals). These phenomena are most frequent among predators.



Gentler forms of interspecific competition are manifested usually through the weakening of some part of the individuals, exclusion of them from the processes of reproduction. The cases of death of individuals under such forms of competition are less likely. To these mechanisms of interpopulational homeostasis relate those that oppress (inhibit) emission of substances into external environment by the stronger individuals, stressful phenomena, territory division (territoriality), migrations between populations.

With high density of individuals in the populations, stressful phenomena can be a regulating mechanism of quantity. They are more typical for mammals. Under stresses, usually, a part of individuals decreases or loses reproductive functions (is excluded from the processes of reproduction). Stronger individuals are less likely to feel stress and its consequences. Under the weakening or stopping of the stressful phenomena, organisms usually restore functions of vital activity and reproductive process.

Migrations as a factor of homeostasis are usually of two kinds. The first kind relates to mass exit of the individuals from the population under the phenomena of overpopulation (congestion) (China). The second kind of migrations is connected with more gradual (surgeless) departure of a part of the individuals into other populations with less density of population (America, Canada).

Ambiguous reactions of the populations to the immigrants (France, Germany). In the periods of high population growth rate they prevent residential settlement of the individuals from other populations. Under low population growth rate there is a phenomenon of the reverse order: the number of the individuals, which leave the populations, decreases dramatically, the mechanisms, which prevent settling the individuals from other populations (immigrants), are withdrawn.

It is clear that homeostasis manifests itself fully, if all mechanisms that lie in its basis, work well. For example, the



correlation between the number of predators and preys is not disrupted abruptly, and there is no room for the action of the factors that weaken populations (pollution, habitat destruction etc.), critical measures of population level are not surpassed etc.

Nowadays, such abnormality of homeostatic mechanisms is caused in most cases by anthropogenic factors. In this view, one of the most important tasks of a human is exclusion or sharp reduction of such factors action.

4.4. Paradigm search of the general theory and practice of biological systems management

This subchapter's task is to determine the measures of formalization, i.e. of theoretical attaching to ecological management and personnel management, to determine the extent of efficiency of the biological systems management technological equipment.

Scientific support of biological systems management has not obtained the system character yet. The analysis of the category apparatus of this line of management activity is rather vague and not focused on the subject and object of the biological systems management. Absolutely different is the theoretical prove of the concept of personnel management.

At the same time, as it follows from the mentioned above material, we have to study the 'subject-object' relationships. In contrast to classical gnoceology with the subject-object dichotomy, Edmund Husserl in his hermeneutics showed that consciousness of [subject] and subject of [consciousness] are inalienable from each other. Primary reality is neither consciousness, mind, spirit, on the one hand, nor nature and substance, but on the other hand 'vital kingdom', from the very beginning subjected to the subject-object split.

We seem to approach to the fact that a person has to find their place in management because management is, first of all (and by essence), the management of your own self, but not of the others. The latter is done, if required, but only as a secondary phenomenon.

During the history a person has re-invented themselves many times, entered into his/her own being in many different hypostases, images (alter ego). It is reflected in «A Man is a Measure of All Things» by Protagoras, and «State is a Sovereign» by T. Hobbs (or «State is Me!» by Louis XIV), and getting in touch with oneself (re-inventing oneself) in a moral imperative of Kant: 'Treat others as you would like to be treated yourself', and discovering their own place in history: history as life of 'heroes' by Carlyle or history as life of 'a simple person' (people) by L. Tolstoy, a person discovered themselves in religion, in philosophy, in science and in many other things.

To the concept of reflection management we were forced by a belief that one can manage only what he does himself. Recently in philosophy there has appeared an idea of 'feeling-thought' (A. Kurinsky [See: 301]), which reflects the inextricable link between the intellectual and emotional components in a person's work. In addition to a human practice (and we talk mainly about practice of management) we can attempt to make a further generalization and presume even a notion of 'thought-feeling-action', which emphasizes the focus of a subject's thought and feeling to their own action, i.e. emphasizes the unity of the elements of this triad.

The situation, when the thoughts and feelings of a subject are oriented exclusively to the actions of other individuals – a moment of estrangement, is inadmissible. In addition to professional activity of professionals this notion (triad) possibly does not evoke questions – actions of professionals are not estranged. Similar situation is created by a reflexive management for a leader.

And now from Kant's imperative: 'a man cannot be an object of anyone's activity, but only a goal', we move further: 'a man cannot



be anyone's goal either, but only a goal for himself'. In reflexive management the differentiation between the subject and the object is withdrawn – an object for the subject of management is its own activity. Now, the only one possibility to do the work that is left for the subject, – is to make it its own activity. This is the first principle of reflexive management.

So that the subject of management was able to construct an enterprise, it is necessary first to build it in abstract notions. This is the second principle of reflexive management. Traditional characteristic – 'concrete thinking leader' – in reflexive management is fully conquered, stops being a positive characteristic of a leader. Leader's activity according to the reflexive method of management is similar to mathematician's activity in its abstractedness. 'Life is complex because it is concrete', as mathematician M. Lazaryev says, and mathematicians overcome complexity of life by the entering the level of abstract ideas. The same as in the reflexive management the complexity of managerial practice is surmounted. Brilliant success in the management of S. Vitte (a mathematician according his formal education) is significant; his metaphorical way of thinking demonstrates his constant intention for generalization, abstraction.

There is no unambiguous idea of how science has to support the sphere of the biological systems management. Some authors think that it is a subject of praxeology, others – of the theory of management, the third – of the ecological management, and we state – of the issue of the general theory of management.

In Russian and British textbook (manual) under the editorship of Ye. Morgunov «Models and Methods of Personnel Management» (2011) the authors state that praxeology can be such science [301]. The book states that: «Moving from the sphere of practice of the reflexive management, where our first ideas appeared, into the sphere of scientific investigations, we need not only to find out, identify, but also to give names to the 'searched' science. Transferring from the practice and concept of the reflexive

management of their name – the reflexive management – onto the related science has a drawback that impossibly narrows the sphere of potential investigations of this science. It is clear, for example, that physics cannot be of the same name with any of the areas of the technical practice or engineering because it proves the phenomenology of the majority of them.

Virtually above we have determined the object of scientific research in a concept of reflexive management – they are the notions connected with the construction of own activity by a man. It is natural to put a question – if there is already such a discipline in the system of sciences that has the same object of the research or at least an object that considerably has something in common with it. And such discipline can be found – it is praxeology» [301, p. 201].

Appearance of praxeology was manifested, as it is known, by a publishing of Kotarbinskiy's monograph «Treatise about good work» [222], in the introduction to which G. Popov writes: «What is the task of praxeology? It is to find the general laws of any human activity, and on this basis to derive most general rules of such activity» [222, p. 9]. And later: «A very important aspect of praxeology is its connection with general moments of an abstract process of work, formulated by K. Marx in «Capital». It is valid to say that the brilliant ideas of K. Marx about the general character of work may be called an initial point of praxeological analysis» [222, p. 11].

However, the author of praxeology himself estimated its tasks more humble: «The ideas in this work relate to praxeology or general theory of the activity's effective organization. Necessity and possibility of elaborating such discipline are conclusive. The fact is that the recipes of effective work are more or less general. ...Praxeologists set as a goal the study of the broadest generalizations of a technical character. It runs about the technique of rational activity as it is, about the regulations and warnings important for any action, the efficiency of which must be increased» [222, p. 20]. I.e. T. Kotarbinskiy talks about the



technical (in the wide sense) activity, to which the notions of efficiency, 'good work' are related. Such notions cannot be related to science.

It is clear that the reflexive management is rather far from entering the professional culture, so it is quite hard to give an effective example of some appropriate practice. But the examples that demonstrate some particular parts of the reflexive management – the stratification of first person's and subordinates' activity, the existence of the first person's activity sense, his/her self-reliance on own activity etc. – are possible.

In the content of this line of work there is also a significant work of P. Drucker «Management Challenges for the 21st Century». In contrast to the enterprise activity standardization admirers, where a manager has a passive function of a supervisor, P. Drucker considers the basic activity of the manager the control of objectives and self-control [553]. His acute eye found some progress that appeared in the West in 1950s – the focus on non-material values, financial results – in contrast to 'conveyer', production, absolutely material prewar economy.

Management of a biological person partially is reflected in «Personnel Management», although the authors of the textbooks and the researchers do not emphasize this aspect, but consider its potential in a discourse of social management [222 et. al.]. At the same time social and psychological factors influence exactly the nervous system, i.e. a biological person. It is one of the most popular part of management of people at the production and beyond it.

In the process of personnel management with the help of different methods the incoming resources (where the most important is the information about people) 'are transformed' into an intermediate result – the behavior of personnel, and later into the concrete result – an objective of the whole activity in the area of personnel management, which is subordinate to a general objective of the organization.



The process of personnel management has a cycle nature: the execution of an objective is constantly estimated and correlated by both: the leaders and the subordinates; the feedback closes the cycle bringing the process to its beginning – the stage of incoming of the resources into the system.

The environment represented by the elements of other systems of personnel management (for example, change of the human resources policy of the competitive organizations or increase of the activity in the actions of trade unions), influences all elements of the system (that can be felt most of all on its entrances) that actually come from the outside (at the same time they can be the elements of several systems simultaneously). For example, a person who works at the organization is, first of all, a member of a society, they can be a member of a trade union as well, work in other profitable organization, and also belong to civil and political organizations that influence in a certain way the organization that is the main workplace of this person).

«Different groups of employees must be ruled differently; one and the same group of employees should be ruled differently in different situations. More and more often they should be ruled as 'partners', and partnership itself excludes 'ruling' because implies the equality of all members. The partners cannot order each other. They can only persuade each other. People should not be 'ruled'. The task is to direct people» [158, p. 39–40].

In this conclusion of P. Drucker a powerful claim on a steep turn in a categorical apparatus of the live systems and, above all, people management is formulated. It must be traced on the example of classical for the sphere of people management doctrines of «human relationship» and 'personnel management', and also the ideas of new age, for instance, the concepts of 'gentle management' [20], 'neuro-management' [148], 'postnonclassical management' [319] or other mechanisms of management of live systems that are given in modern literature [359] etc.



The models made in the context of environmentalism (from English «environment») get a more applied figuration. In science under the latter we understand:

– The theory of management of social economic development and environment that considers the mankind to be a part of biosphere and claims the necessity of changing the nature in the interests of a human [188];

– The theories, which study patterns and forms of society cooperation with a place of existence, the variety of the social changes connections with the changes in material preconditions of social processes life support [220];

– A branch of science that was formed in the middle of the XIXth century and implied a range of new ideas concerning the concept that people developed a lot under the influence of environment;

– Social and economic movement that was spread in the XXth century in European countries and directed to increase efforts for protection of the environment.

Today this term is mainly used in the latter meaning. As a social and ecological model it covers a range of such important problems to be solved: the decrease of biological variety, global warming, ozone holes, acid rains, burial of radioactive waste, the possibility of severe winter, animal rights neglect. And main steps to solve them are: transferring production to non-alternative technologies, increase of alternative power engineering and electric transport, waste processing, sewage treatment, deserts irrigation [281].

Let's pay attention to the fact that the authors do not expect harmonization with technical systems management. Again, it is a so called situational solution of a problem of harmonization of the opposites according to the principle 'man-nature'. Interesting results were given by searches of eco-safe development philosophy done during the thesis research by N. Semenuyk. The author proves that «realization of a threat, which seizes the mankind in connection with the worsening of the ecological situation in the epoch of globalization



and information revolution, needs shift to new objectives and tasks of life and activity of a person, formation of new philosophy of life activity, which would prevent ruining of the world, would provide eco-safe existence of the mankind» – exactly the latter is being realized in a life space as 'philosophy of eco-safe development'.

Generalizing philosophical searches of last decades, N. Semenyuk proves the conclusion that as optimal model of the mankind's eco-safe development there can be a model of a 'stable human development'. And the constant development is defined by it as «the process of productive forces harmonization, provision of guaranteed meeting of at least minimum needs of all the members of the society on condition of preservation and step-by-step recreation of the environment integrity, provision of the balance between nature's potential and demands of people of all generations» [401].

The author also singles out the main directions and priorities of a steady development: a) democratic changes, social guarantees, rights and freedoms of citizens; b) steady usage of natural resources potential; c) creation of integrated state ecological policy; d) formation of legal base; e) organization of orderly management of these processes. As in other models, she emphasizes the importance of the formation of a high level of ecological consciousness of the citizens, their culture and behavior in the system of 'ecological total education' of the population as the initial position of realization of this model [401].

S. Prutko considers the most general conditions of eco-safe development the following ones: humanistic determination of the society activity, formation of civic society, system approach to solution of ecological problems. The main priorities of the eco-safe development policy according to the researcher are the following: putting the state of environment in appropriate for normal living norms; overcoming negative consequences of Chernobyl's catastrophe and prevention of analogous man-caused catastrophes; formation of the authentic net of nature protection objects for protection of biological, ecological and landscape variety of the nature of Ukraine [378, p. 3].



An effective model that is suggested by the author can be considered a formation of an ecological net of Ukraine. Ecological net is also a factor of protection of the variety of life and as a natural component of the system that provides main human right for the environment favourable for life, health and welfare [378, p. 4].

Synergetic model of eco-safe development is based on the recognition of the necessity of co-evolution (harmonic co-existence and mutual development) of the nature and the man [511, p. 191]. It is clear from the synergetic vision that the result of learning the laws of nature and society and the main condition of totally conscious activity must be recognition of indissoluble connection with these over-systems and the acceptance of the idea of co-evolution by every personality. It gives a man not only a possibility to use objective laws consciously and effectively in his practical activity but also a guarantee that his negligent acts according to external systems will not lead to damage of his own environment [318, p. 44–45].

So, although biology is constantly been related to the sphere of management for validation, it itself faces the problems, which are close to those that appear at using its definitions in other disciplines [95]. Since the second half of the last century the scientists become more and more complied with the thought that psychological, social and space phenomena are various forms of life. Hence, biology has the most profound significance for the function of scientific knowledge grounds [454; 456]. But biology expansion unfortunately is accompanied by biological reductionism. It is important to separate reduction and scientific explanation by using the ideas borrowed from other disciplines, limiting the former one and supporting the latter one. Reductionism in management results only in the semblance of problems solution while creative biological analogies, on the contrary, are very heuristic and fruitful.

The concept of ecological management includes: validation of possibility and necessity of ecological processes management; specifying of the sphere and the object of management in ecological



management – it is cooperation of a man and nature; formulation and realization of the goal of ecological management – new quality of existence and life activity of a man; conformity to the scale of a problem and the scale of management; infrastructure of ecological management; correlation and interrelation of transnational and regional problems of ecological management; functional meaning of ecological management; principles of ecological management; methodology and the role of science in ecological management; development of ecological management; systems, mechanisms and technologies of management in the concept of ecological management [221].

Now we can consider some most important aspects of this concept of ecological management. First, it relates to the principles of ecological management. Its peculiarity and its content are shown in them most of all.

The principles of ecological management must be differentiated according to the main features of management – mechanism, process and system of management.

1. Principle of reliance on ecological consciousness, which must be formed and developed in the processes of ecological management. Exactly in human consciousness the possibilities of usage of the most effective ways of actions, i.e. the mechanism of management, are hidden. For the interests, values, and motives of activity are important characteristics of consciousness. The goal attainment depends on their system.

2. Principle of ecological motivation of the activity. Its essence is in prevailing usage of the ways of motivation directed to the solution of the ecological problems. Indeed, experiences have shown that administrative or merely organizational ways of management are ineffective.

3. Principle of advance or prevention in the solution of the problems. In ecology many processes become irreversible too quickly. The whole mechanism of ecological management must be oriented to the preventive measures of crisis situations appearance.



To some extent it must be manifested in any management, but for ecological management such approach is the most important.

4. In a procedural relation the principle of determination and strategy plays the main role. Ecological management cannot be effective if it is realized according to 'vague' and non-defined aims, if it does not have clear strategy. The aim of ecological management must include such components that reflect problems of ecology and connect them in the system of general problems of the production development.

5. In ecological management a special significance has a sequence in problems solution. This predetermines the principle of consistency that reflects interrelations of ecological problems, the number of direct and indirect consequences of their solution. In any management there is a choice of initial problems for elaboration of management solutions. But the reason of this choice can depend on different criteria. They determine the structure of consistency that follows ecological laws.

6. We should also name one more procedural principle of ecological management – the principle of timeliness. The cycles of ecological problems life-time are specific. To determine a moment of the most effective solution of an ecological problem means to prevent its extreme accentuating, the crisis, to minimize consequences.

7. In the system of ecological management there is a principle of functional integration. It is impossible to manage successfully relying only on functional solution of the problems of ecology. It is necessary to focus the whole management to ecology, to integrate the functions of management according to the objectives of ecological development.

8. The principle of professionalism is also important in environmental management. It lies in the need of special training of the managers, who have specialized expertise in the sphere of ecology. Professional training gives available (functioning) preferences of management and specifying the priorities. This is what we are now sorely lacking.



9. In today's management system we are lacking responsibility for the environmental consequences. Hence there becomes clear the importance of the principle of developed and balanced correlation with the factors of ecological effectiveness of management.

The principles of environmental management can and should act only in a system, in interdependence. For each of them complements and specifies the other. The entire set of environmental management functions can be divided into three groups. In the first group – there are functions related to the natural resources management, their utilization, transportation, and production facilities location. In the second group – there are the functions of technological innovation processes management, and, mainly, administration of waste recycling and utilization, management of environmental safety. In the third group –there are very important functions: culture Sociodynamics management, urbanization administration and management of regional ecological situation.

Functions of environmental management cannot be reduced only to the administration of technology and production processes. This management is extended to socially meaningful boundaries.

Environmental management is the management that is focused on the development, and actually it is the management that develops. Environmental issues cannot be solved on an ad hoc basis. Ecological management cannot be introduced immediately. You need to know clearly which factors determine its consistent and steady development, which determines the appearance of a new quality of management that turns it into environmental management.

We may call nine interrelated factors that determine the development of environmental management. Environmental management infrastructure is a set of environmental conditions that promote or hinder its emergence and development. Mentality is a way of thinking, traditions of behavior, and patterns of activity. Ecological culture is understanding of the importance of ecology,



the habits of behavior, attitude to environmental issues. Environmental education is the knowledge of nature and its interaction with the human, the ability to solve environmental problems, mastering the skills of their analysis. Monitoring of environmental situations is a consistent and continuous monitoring of environmental conditions. Availability of resources appropriate to the needs of environmental management. The system of environmental management information support is the structure of information, the order of its collecting, movement and use. Legal support of environmental management is the availability of laws that allow and force to solve environmental problems. Finally, the general trend of social ecological development is the sources, the forms of manifestation of environmental problems, possibilities of their interpretation and the potential of social consciousness.

In the range of these factors today the factor of environmental education is of the central importance. It is system-forming and can be considered in two perspectives – as the general environmental education and environmental education of modern manager, his training in this area.

Tools or technologies of biological systems management have been gradually developed by the international community. To our surprise, in ancient India, in yogis' activities we find the elements of biological cybernetics [316]. During thousands of years yogis master an extremely complex and well-reasoned system of the human body management.

Now we have to admit that it was the first created by a man structure of a large system management. It used, however, given by the nature the information and logic facility – the human brain and his nervous system. But, without doubt, this management structure was extremely delicate.

Its mechanism is still not completely clear from the position of European science. Moreover, so far, as we know, no one tried to understand it within the modern cybernetic concepts. The fact also should be noted that our European medicine still remains at the pre-



cybernetic level: it does not assume the task of designing an optimal system of the human body management [316, p. 22].

Genetic engineering is the most promising means of improvement for the management of the biological organism development; it is based on molecular biology, which makes it possible to make changes in the molecular interactions of basic biological molecules in the cell and beyond it [122].

Biologists have mastered the techniques that allow manipulating with biological molecules, to explore and modify their structure. Due to changes in the basic biological DNA molecules there is possibility to create variants of living systems that do not arise as a result of natural evolution.

Technologies of producing the recombinant DNA and cloning (multiplication) genes were preceded by the methods, with the help of which a DNA molecule was split into fragments, modified and reconstructed again into a single whole. As a result, the scientists obtain many copies of this molecule. Subsequently, by using this recombinant molecule, RNA molecules can be synthesized and the protein with specific qualities and characteristics can be obtained.

Genetic engineering is a new field of molecular biology, which develops methods for transferring genetic material from one living organism to another in order to obtain new genetic information and to manage heredity [120]. The development of genetic engineering is connected with the achievements of modern genetics, microbiology and biochemistry. The foundation of this branch was laid by P. Berg (1972), who produced the first hybrid (recombinant) DNA.

In practice, we use two terms – genetical engineering and gene engineering. It is important to note that notion genetic engineering is used as a broader concept, i.e. it also includes gene engineering. Thus, restructuring of the genome by conventional genetic methods, i.e. mutations, recombinations is not included in gene engineering.

The potential of human gene engineering is discussed separately [121]. When applied to a human, genetic engineering could



be used to treat genetic diseases. However, technically, there is a significant difference between the treatment of the patient himself and the changes in the genome of his descendants. The task of changing the genome of an adult is a little more difficult than developing new genetically engineered animal species, as in this case you need to change the genome of great number of cells of the organism that has been already formed, but not only ovicell-embryo. For this purpose the use of viral particles as a vector is recommended. Viral particles can penetrate in a significant percentage of cells in the adult, embedding their genetic information in them; the controlled propagation of viral particles in the body is possible. In this case, to reduce the side effects, the scientists are trying to avoid the introduction of genetically engineered DNA into cells of genitals, thus avoiding the impact on the future descendants of the patient. Also, it is worth noting the considerable criticism of this technology in the media: the development of genetically engineered viruses is considered by many people as a threat to all humanity. Although on a small scale, genetic engineering is already used in order to give women with some types of infertility the chance to become pregnant.

Genetic engineering creates specific products – genetically modified organisms (GMOs). Genetically modified organism – is an organism whose genotype has been artificially altered with the use of genetic engineering techniques [119]. This definition can be applied to plants, animals and microorganisms. Genetic changes are normally performed with scientific or commercial purposes. Genetic modification is distinguished due to the purposeful change in the genotype of the organism in contrast to the random modification characteristic of natural and artificial mutagenesis. The main type of genetic modification today is the use of transgenes to create transgenic organisms.

The use of such technique is found in the studies. Currently, genetically modified organisms are widely used in basic and applied research works in medicine, agriculture and other areas of transgenic engineering.



For population kinetics of human society the green economy is a modern means of reflexive management, which is seen as a system of economic activities related to the production, distribution and consumption of goods and services, which should lead to higher welfare of population without putting it in ecological risks.

Green Economy (Ecological economics) – is the branch in economic science that emerged in the last two decades, in which it is believed that the economy is a dependent component of the environment within which it exists and is part of [180]. The concept of green economy includes ideas of many other areas in economics and philosophy, including feminist economics, postmodernism, ecological economics, environmental economics, anti-global science, the theory of international relations and others. It is based on the three axioms: 1) it is impossible to infinitely expand the sphere of influence in a confined space, 2) it is impossible to demand meeting infinitely increasing needs in conditions of limited resources, 3) everything on the surface of the Earth is interconnected.

Supporters of the Green Economy criticize neoclassical school because within it the natural and social factors are usually considered as externalities; in the best of cases, they are considered fixed and are not analyzed in dynamics. Green economists believe that the economic growth is a mistake, since it contradicts the first axiom. «Rostyzm» (Growthism), according to the proponents of green economy violates ecosystem activity.

Green economists proposed the establishment of Tobin tax of 1% of all international trade agreements in order to send the collected funds to poor countries for inhibition of differentiation, which is increasing between developed and not very developed countries. In addition, it is proposed to use the category of «natural capital» rather than the category of «natural resources» that allegedly shows a passive role of nature in the economy.

Among the supporters of the Green Economy we highlight: M. Bukchyn, J. Jacobs, R. Carson, E. Schumacher, R. Costanzo,



L. Margulis, D. Courtenay, B. Faller, H. Delhi, D. Meadows, P. Houken, A. Tversky et al. Since 2006, its followers have been edited the International Journal of Green Economics; the research institute of green economy is established.

Thus, the scientific and theoretical foundations of biological systems management have just been emerging. In practice, it happened so that this area broke, at least, in three discourses, namely: a) the management of the development of biological organisms – plants and animals, b) HR (human resources) management, c) management of populations, including the management of the system «man-nature»-ecology relationship.

Conclusions of the fourth chapter

The analysis of the conceptual and ideological component of the biological systems management has proved that there are no sustainable concepts of ideological approaches to managing the biosphere. The object of management is so complex that the ideological and administrative activities of the international community were unable to overcome the crisis of views on this phenomenon. The content and forms of management have superficial appearance, and therefore do not present the phenomenon in its entirety of problems. A person is limited to the analysis of «hot issues» – environmental issues, such as the extinction of populations, pollution, ozone holes, the lack of drinking water, and so on. As a way out of this impasse the author suggests to implement the idea of eco-humanism as the ideology of biological systems management.

The morphology of biosystem is not visible, and the need is to reproduce it in terms of plant, animal and human organisms and



organizational forms of their common existence, and that is why it is difficult to design even in thought the adequate to it structure of the management of biota of everything living. At the same time we trace at all levels of organization of living things the elements of the management system: the subject and object of management, the programs of management, methods of producing an effect on the object, homeostasis and feedbacks. The specific feature of the governing body morphology is that the subject and object of management are the items of a biological unit, and that is why the organization of interaction with the environment and within the population is a function of the organism.

Functional analysis has shown how the complex morphological structure of biological systems provides a functionally rich life of all living things both at the level of organisms and at population levels. Only the species of homeostasis total is several dozen. And that's while the other levels of morphological units being are not considered at all, such as cellular, cytoplasmic, histic, of the system of phytocoenotic regulation and others.

We have seen with what difficulty the world community's theoretical search for the mechanisms of biological systems management is being undertaken. It has a narrative character, since it is rather based on the achievements of practice than on the logic of the biosphere evolution. And it makes sense to agree with the other researchers that at this level of the organization of the universe existence, the reflexive management should be considered as the leading type of management, because living organisms have such property as reasonable activity (L. Krushinsky).

The specific character of environmental management that should regulate human behavior from the perspective of managing environmental determinants of human life organization in organizational interaction «man – nature – space» based on eco-humanism is discussed in detail.

For us it is important that the above properties of biological systems be quite identical in structure to the management of



technical systems. This means that the categorical apparatus and the ideology of our research plotting have also found its confirmation. However, we realize that in our life the processes of biological systems management are realized in much more complicated way than we have reproduced here, the biological structures themselves are extremely complex and self-sufficient, and the mechanisms are more exquisite.



CHAPTER 5

COGNITIVE FACTORS OF THE GENERAL THEORY FORMATION IN THE CONTEXT OF SOCIAL SYSTEMS MANAGEMENT

The task of this chapter is to formalize the same main features, which were rendered above for managing the technical and biological systems, now in the horizon of social systems. Its problems were investigated by well known philosophers (Aristotle, Confucius, Machiavelli, G. Hegel, K. Marx, modern theorists J. Vernet, D. Bell, J. Galbraith etc.); they saw in the management the force capable of rescuing the society from its inherent social illnesses, to increase its vital capacity.

Now we consider only the main philosophical parameters of the social management phenomenon, and for the more detailed their characteristics we suggest the researchers to refer to our book «Philosophy of Social Systems Management» (2012) [53].

5.1. Humanism as outlook and ideological paradigm of social systems management at the stage of transition to the information phase of development

The task of the analytical and research work in this chapter is reference to the outlook and ideological foundations of the planetary community social development management system.

The ideology of management activity, as we have already seen in the previous stages of the research, is the most significant element of objectification in the organizational consciousness of society, because it, in particular, directs the whole development of organizational thought to the future, saves the past and preserves the present. According to S. Sidenko, «The main problem associated with globalization in this century is to find the standards and institutions that would ensure more effective governance at the local, national, regional and global levels» [404, p. 499].

It is connected with and is explained by the functions of ideology as a social phenomenon that can bring human activities onto the right track. So our task is to integrate with the tools of philosophy into one scientifically-coherent system the human experience of managing technical, biological and social systems, broken with the power of specialization. The high point of ideology, according to A. Bogdanov, is the creating of organizational ideal, and particularly this is the organization ordering [65, p. 69]. The ideology of management is of such influential force on the state and behavior of social systems that Zb. Brzezinski expected after the failure of the counter coup in Czechoslovakia (1968) that «the ideological emptiness ... could become the decisive motive of political changes in Communist societies» [See: 230, p. 49]. And today, with the height of the early twenty-first century and the

events that took place on the world stage, we have to admit that his prophecies have come true.

The ideology of social systems management, which should be adequate to the nature of the planetary community development in the XXIst century, is now at its formative stage. This process has a humanistic content. Humanism (from Lat. *Humanus* – human) is the ideology and practice, based on the principles of equality, justice, regarding a person as the highest value. In particular, the German educator J. Herder wrote with the pathos of «divine humanity», which initiates from that impulse to self-improvement that pervades the evolution of all previous forms of life. «Have a look back and see how behind us everything is gradually matures preparing the human form; how we ourselves have just the very first germs of the future human predestination» [123, p. 125].

Reflecting on the function of the mankind in the Universe, he even expressed his concern of how much a man is an imperfect being and how much this imperfection does not match the grandeur character of the mission assigned to him. «It's amazing – I. Herder wrote – the fact strikes us that of all the inhabitants of the Earth people are farthest from achieving the goal of their predestination, but it is undeniable fact» [123, p. 131–132].

The initiators of changes in the ideology of management are the authors of «Humanistic Manifesto 2000», who, while remaining the supporters of the idea of humanism, believe that the old ideas and traditions do not correspond any more to any existing conditions or opportunities that open up the future. Old humanism, they believe, basing on rational means and positive outlook needs to be updated with «fresh thinking» as a new planetary humanism is capable to give positive direction of evolution in the future.

This position is appreciated and caught up by domestic researchers, who noticed the process of revolutionary change in the ideology of the social development management and analyze it in the light of humanistic management. As this is the innovative point of view at the ideology of the social processes management, we



apply to the works of V. Voronkova «Humanistic Management Philosophy» (2008) [99]. V. Voronkova considers «humanity as an effective tool for knowledge possessed by mankind, and which cannot be replaced by neither faith nor enthusiasm, nor reason, nor intelligence, as this concept is the doctrine of the importance of the humanity individual's value, and the principles are the ideas of humanism implied onto the affirmation of the human as the basal and general meaning-substance of the Existence – Being in social and ontological processes» [99, p. 9].

In order to develop the humanistic management, according to V. Voronkova, «we should give up: a) underestimation of the role of the historical process subject, which preconditions the choice of direction of a further development of national and international society, the formation of a new world order and general future of global society b) many of old stereotypes, inert thinking, which prevents the formation of principles, standards and procedures of the new humanistic thinking; c) belief in the omnipotence of technological, monetary and informative way of the world improvement» [99, p. 10].

The value of the concept of «humanistic management» V. Voronkova sees in the fact that it, this world view attitude, «can determine on a global level the main vector of transformations taking place in the modern world. Humanistic management means the essence of the processes, which combine three kinds of evolution – natural evolution, social evolution and actually activity evolution, and in the focus of them there is a human. The humanistic approach results from the synergetic and nonlinear vision of the ways of solving general civilization problems, in the context of which a transition from the technological model of development, in which a person is opposed to nature, to the revolutionary model of human existence» [99, p. 10].

A new management philosophy should become the means of its realization, which today is still an elusive goal. Therefore, it is quite natural that the world community entered the spin at the first



movements of the planetary social system to the information phase of planetary life development and cannot get out of it for over two decades.

Today, on the planetary ideological horizons the remains of distraught technocracy attack. In the field of economic life, i.e. of social development, the ideology of a golden calf flourishes – the ideology of money and profits causing even social movements «Liberate London» and «Occupy Abai» in Moscow, «Occupy Wall Street», «The Movement of Indignant» in Spain, Maidan 2004 in Ukraine, and the revolt of the masses in North Africa in 2011. Ukraine and most CIS countries choke with the attempts of the politicians to cultivate the ideology of financial profitability and political expediency.

Thus, the discourse of social systems management appeared to be the most widespread and multicoloured. So, it is not always so simple to deal with this problem. How, for example, to build the concept of purpose for such large systems, such as the state, which must be consciously managed and, moreover, it should be done in a certain sense optimally? This problem is discussed in the work of D. K. Price – an American expert on issues of public administration, who served as a consultant for three presidents [566]. «The main difficulty in the scientific management of a state, – he says, – is the formulation of objectives. They can easily be formulated for the lower parts of the system – individual firms or small military units, but how to formulate them for the state as a whole? » [316, p. 19].

A significant obstacle to the rapid implementation of ideological and world outlook innovations in social management practices are outdated categories of forming new concepts of social systems management. That is why, by no means accidentally, in the economic literature the word «administration» is actively being replaced with the word «management». The fact is, the Russian word «управление» (governance, administration) is cognate with the words «правда, праведность, справедливость», i.e. connotes «truth, righteousness, justice». Governors in the history of Russian



civilization were the title for moral people, who realized the ideas of justice, based on the righteous moral economy. Its basic ideas are radically different from the stereotypes of Western «management».

Therefore, in our view, it is reasonable to analyze the content of these concepts in the Ukrainian, Russian and English languages; this was done by professor I. Shavkun in her doctoral research, who feels at home with foreign languages, studied the phenomenon of management philosophy [517, p. 21–41]. V. Andrushchenko and V. Saveliev do not quite agree with her [17]. V. Rozin arrived at the same idea [389, p.170–285].

This means that now there is no coherent view of the subject of study, because there is no well-defined generic and specific relationship between them. This means that management, being a subdivision of the general theory of technical, biological and social systems management, is always a managerial action, but a managerial action may not always be management.

Genetic analysis explains the origin of the phenomenon of social management that has certain limits of functioning or competence. The limit of the social world, the second nature, or the social form of the universum motion, is at the same time the scope of management of social processes.

The lower limit of the social world can be determined according to several factors, including: the nature, type of energy or even indirect factors. We suggest that based on the semantic structure of the human person the lower limit can be determined regarding the appearance of the person's feelings. It is starting with senses that a human brakes away from the first nature, and then is found under the influence of subjectified first nature or of potential social world that is being formed. Here the line of the first nature is clearly visible, though the beginning of the second nature we perceive intuitively, as long as nothing else is seen yet.

The upper limit of the social world is fixed by the appearance of sub-community formations and of impersonal forms of social subjectivity [See: 80]. Perhaps the apparatus of self-regulation of the



social world, used as a criterion for the identification and comparison of meanings contained in the signals coming from its lower levels, already belongs to a logical nature, i.e. the third, sub-social level. The situation is almost the same as the situation with the definition of the upper limit of the first nature, when a person, as its product, in fact, manages its development and, at the same time, includes the potential social world.

If you sum up the above said, it appears that the social world begins with the senses of a human, and ends with the verge, beyond which the morphogenesis of quasi structures of the apparatus of its self-regulation – the third nature begins. For the social world there are, according to many researchers, different definitions – «cosmic civilization» (M. Kardashov), «Omega Point» (P. Teilhard de Chardin) and others. This is most likely when the Earth's population reaches the numbers about 15–20 billion people. V. Kaznacheev and E. Spiryn, for example, predict a Big noosphere bang, which leads to the appearance of monolith cosmic mind and noocosmogenesis [See: 195, p.14–36].

Consequently, management philosophy illuminates the causes of the genesis of social systems management. It can do this by adding to the above two more points. The first of these is to clarify the scope of generation and existence of management, and the second one – lies in the characterization of management as the product of self-expanding of the universum, in the structure of which it must reconstitute its own place and the role of management in the life of the planetary community.

For us it is a working hypothesis that the scope of the emergence and functioning of social management is a social world. The key term here is the concept of «world». In modern philosophical dictionaries the term «world» has not received its interpretation. However, referring to the dictionary of V. Dahl, we read: «The world is the universe; the matter in space and power in time; one of the planets of the Universe, our Earth, globe, and world» [295]. Here we agree with the definition of the world as one



of the components of the universe, i.e. such area that is created by us. In the «Philosophical Dictionary» by I. Frolov, «world» is defined as «the totality of all forms of existence of matter»; «the universe in all its diversity» [344]. More full definition of the term «world» we find in the work of B. Russell, who believes that «the universe is entirely spots and skips» [382, p. 169]. It is that one particular «spot» on the body of the universe, which is initiated by rational living matter, the leading agent of which is a person, forms a specific phenomenon that we call the world. It is interesting that the structure of the world he also interprets through the element of language [382, p. 151].

The term «world» we distinguish from the so-called «second nature», because the latter has a place in every corner of the Cosmos. It, the second nature, is a product of the functioning of intelligent substance, and the world – is not just a product of human activity.

Next, we shall develop the second argument and explain, how in general in the self-expanding of the universe organizational, or rather, self-organizational potencies appear and the way they lead to the emergence of management of the objects of the social world. To do this, you should imagine the area of self-development (self-expanding) of social world and how to better describe its system-making planes.

Based on the morphology of the human person, it must expand in two planes. The first one is characterized by coordinates «need – action», and the second one – by «value – meaning». This means that the coordinates of the social world self-expanding have, relatively speaking, horizontal and vertical vectors.

Self-development (self-expanding) of social world in a horizontal plane provides the production and reproduction of material welfare and services designed to meet the needs of a physical man. Hence, the focus on prevalence of material factor in our lives and the materialist conception of history as a whole appears. This type of people interaction we, of course, accept closer



and clearer, as it was described in detail by K. Marx, F. Engels, V. Lenin, and their followers. In this context, a human is earthed, that is immersed in planetary matters, and their main purpose is personal survival and survival of a human race in general. Management does not emerge here but it is used by a man to manage systems – economic, social, political and cultural, similar to the status of management of technical systems.

We are more interested in self-development of universe in a vertical plane. In this measurement the inner content of a human is known to expand through the axis «value – meaning». Thus, sensual consciousness, unconscious mind, self-consciousness, super-conscious, and finally cosmic consciousness (pure reason) we tend to interpret and examine their relationships with each other as once the mechanical, physical, chemical, biological and social forms of the matter motion were considered.

If in the horizontal plane, the labour acted as a transformation mechanism, then in this case, this function is fulfilled by the internal activity of the individual – the human thinking, which gradually comprehends the above-mentioned levels of universe ascent. At the level of the social world that has objectified, this movement is achieved through the collective thinking and collective reflection.

Here we first meet with the phenomenon of self-regulation, since all the elements of its structure and functions of regulation are available. It is at this point where the social control emerges. If in this natural process a man begins to purposefully take part, then there is a special state of it, the system, what we call management. In relation to social systems, it is a social management. With respect to technical and biological systems, it, accordingly, is a management of the technical and biological systems.

Thus, the movement in the vertical plane provides the social world, and we can say even more – the universe, with a fundamental property of self-regulation. So, to complete the system analysis of social systems management, by the way, both: technical and biological, we can only when we will bring them to the level of self-



regulation of the social whole, either of the social body of the country, or of the planetary social organism. The circle must be complete. For us, it is a fundamental research imperative.

Thus, the management is genetically related to self-regulation of social life and is formed over social systems, i.e. in the third world. Contrasting strokes on a canvas that depicts a third level of the universe self-motion in the XXth. century are made by Karl Popper. The third world is, in his view, the product of human activity. It is constantly growing. However, it is important to pay attention to its considerable autonomy. «The world of language, assumptions, theories and reasoning (i.e. of the logical – Yu. B.), in other words the universe of objective knowledge, is one of the most important man-made universes» [See: 482, p. 190].

The basic in the constructs of Karl Popper is a clear distinction between three worlds: World I is the world of physical objects; World II is the world of subjective experience; World III is the result of the intellectual activity. This latter World – Karl Popper says – could exist without being materially embodied. In turn J. Habermas believes that «people live and rotate in three different worlds, although these different worlds in everyday life constantly intersect. First, it is an objective world that dominate business relationships, and secondly, the social world, with its standards and assessments and, ultimately, the subjective world, that is our feelings, hopes, and so on» [303, p. 327].

Thus, the residents of the super-social level are senses or products containing logical relationships. Objects of the third world are not only relevant for granted, but also the potential of the international community [482, p. 190–191]. In K. Popper's works the residents of the third (linguistic) world also are the products of logic. «With our theories – Karl Popper writes – the same happens what happens with our children: they have a tendency to become largely independent of their parents. With our theories the same thing can happen, which happens with our children: we can get from them greater amount of knowledge than originally we put in them» [482, p. 191].



By definition of A. Prigozhin: «Organizations are holistic, separate worlds. And they are all united into a grand world of organizations. At the time, Marx described the technics as «second nature» that humanity has placed between themselves and the environment. So the world of organizations can be defined as a special, «third nature» generated by social relations and that occupies in them a specific place. It is comparable with space technology in society, and to some extent also determines the state» [369, p. 32].

We have come to understanding that the social world self-unfolding in planes inherent to biological man is impossible, because the substance of sociality requires a completely different topology.

The «theoretical» contains all richness of his spiritual power – the mind of man, and «practical» – all his wealth as of a practical agent who has physical strength and is acting in the plane «need – action». Thus, the value - semantic plane can be represented as a theoretical component or potential social world, and need – utilitarian plane, or actualized social world can replace what is usually called the practice. From this directly follows the significance of a theory and practice unity for life of a man in society.

Under the conditions of self-development of the social life in the horizontal plane, i.e. in coordinates «need – action», of course, you can use the space-time units of measurement of the processes occurring. But we should always remember that in the social world we are dealing with the qualitatively new properties of space and time that appear not materially and energetically [90, p. 31]. Using earlier stated deductive approach in the study of social systems, we have to consider this as an important feature of temporality or time dimension, and highlight its role in the development of social systems.

Now we can consider the way itself, the one usually called the social life, and to determine its role in control process. The essence of the social world self-motion, or social life, is found in the process of global metabolic objectified processes, and the products.



Within the social metabolism two sub-processes are worth of discerning: trade and information exchange. The first takes place in the horizontal plane. These are labor and communication, including the man in the production of material and spiritual purposes. Second is in the vertical plane – reflection, which provides a transformation of the universe from lower forms to the cosmic one, and the second – control that provides a transition from the higher or cosmic form, to the lowest. Together, they are part of self-regulation of the social world.

The root cause of human activity, from the perspective of the development of social management, is the need to satisfy their natural needs. Aggressiveness on the environment is the second cause of human activity. The source of energy of social control is combined and therefore virtually unlimited. It is powered from two sources: internal and external, which can be unlimited. Here we have something to explain. First Source that guaranteed social control as a form of Homo sapiens stability and time perspective is the internal energy of biological man.

The question arises, where the social system, while in the homeorhesis mode, takes free energy, and for what kind of work is it uses it? The answer to the first part of the question is found in the works of Behan, namely, in the book «Genesis of the Social Organism Country». This researcher writes: «A good nodosity» universe ... is just determined, what we are aware of now, by the term «activity», in this case the human body. The «life» as an ingredient... reflects the interaction of material and spiritual, while «activity» reflects the production of free energy that can perform work on the formation of the social environment» [44, c. 115]. E. Bauer called this energy «structural energy» [31, c. 85]. In his view, «in living systems all inner work or targeted against them change can be produced only by virtue of structural power, that is systemic forces» [31, c. 55–56].

Causality in the management of social processes is the subject of our special attention, because it determines the nature of



generation, establishment, function and development of the phenomenon through innovative changes. It was here in the course of organizational activity that the value and semantic components become both direct and indirect bases that reflect the cause-and-effect link. Causality in this case is the ratio of required «generation», «call» to other changes of a particular object caused by material impact on it of another object [76, p. 463].

Value-semantic construct at least determines two kinds of causality, namely teleological and causal-mechanical. Which of them will dominate in a particular case depends on the orientation of the person that cultivates management practices. If semantic determination/regulation dominates, we are dealing with a teleological causality. Note, within the framework of teleological approach («telos» – end, the goal is translated from ancient Greek, teleology – the doctrine of expediency), are distinguished some intellectual currents: religious, anthropocentric and immanent [See: 446]. This means that the teleological principle is in action; that is to say, the purpose determines the development of the social system. Targeted approach replaces the reflexive human behavior. As Feuerbach wrote, «in general, a person is a being always acting according to known targets, they does nothing without purpose» [392, p. 629].

Free causation in the field of social systems has unlimited space to identify, since the age of innovative economic development requires creativity from the individual. This forces us to change the principles of development: from the principle of dynamic equilibrium to the principle of sustainable imbalances (E. Bauer). Free causality, as Kant wrote, «the ability to spontaneously start condition, therefore, the causality of freedom is not subjected, according the law of nature, to other reason that would define it in time ... mind creates the idea of spontaneity that can itself act without another preceding starting reason, which, in its turn, determined it to action according to the law of causality» [199, p. 327–328].



Thus, the social world dominated by free causality, which can abruptly change the course and direction of social processes. This is explained by the specificity of the social process that is spontaneous emergence and transience of a course of development. This steady increase in the number of producers of intellectual energy, a steady increase in their natural maturity, the growing extent of their individual and collective activity, as the researchers believe, will inevitably lead to an explosion in the future noosphere complex self-regulation, in which the incentive and executive components are combined [205, p. 63].

After genetic analysis of social control, the next logical step is to analyze its nature. The most common view of the nature of government is a view from standpoint of information and activity component, which has recorded the views of objectivity and subjectivity in this phenomenon. Therefore, information/knowledge should occupy in our study a special place, because it is its movement and modification that serves as a litmus paper to assess the status and prospects of the whole process of management and its individual phases, despite that it is still unrecognized philosophical category.

It should be mentioned that through the channel system of management circulates not ordinary information, but special – managerial, which is of two types: the directive and executive. This fact, availability of two types of information, suggests that management area is located in the vertical self-motion of the universe, which has coordinates «values – meaning». The peculiarity of informational provision of management activities is testified by the fact that in practice has appeared a special language used by the control system [434].

Nature of management has a clear coloring because it uses the power as its instrument. The authoritative character of management attracts attention of almost all its theorists. Therefore, on the basis of the literature sources, it can be argued that management not only uses the phenomenon of power to regulate relations in the



management of technical, biological and social systems, but also has the identical with it nature, if we evaluate organizational activities as a tool for regulating the development of technical, biological and social systems.

However, there is a significant difference between them, because the government is a social institution in which the person has no place, and management – social organism because its structure involves the subject. For illustration, you can bring a number of similarities. The difference is, for example, between the institute of religion and the church, by the institution of marriage and the family, by the institute of education and the National education system.

The essence of social control and its definition is the primary task of management philosophy. Under it its content should be understood, which manifests itself in the unity of all diverse and conflicting forms of its existence. This phenomenon of management is some detection (expression) of the third world logic, external, immediate forms of its existence. In our concept, the essence of social control is the organizational interaction of people and their organizations.

Organizational interaction is a conscious and controlled process, which is derived from the ratio of the needs, interests and goals of organized business joint ventures, i.e. members of a social formation. It characterizes organizational interaction as a multi-organizational interaction system with a wide range of organizational power distribution, which allows identifying, clarifying and creating common goals, organizing organizational links and relations between these entities [464, p. 22]. M. Tulenkov uses this category in two senses: the broad and narrow [466, p. 62].

Moreover, the key role of social interaction in organizational management is reduced mainly to create the necessary conditions for the normal functioning of the social management in transitive society. One cannot help but recall the words of Alexander



Bogdanov on social processes that their main difficulty is their large heterogeneity. The researcher addresses this issue in the following way «their generalized-conscious formulation gives generalized-conscious approach to them; it is the first stage of elaboration of common methods of their solution» [64, p. 49].

M. Setrov draws our attention to the principles of organization, namely, the principles of compatibility, update, concentration, neutralization and labilization features technical, biological and social systems upon which self-regulating system is formed, the one that is governed by the general theory of control and for which we are developing philosophical principles. Each of these principles is responsible for a particular direction of the organization. These functional relations between elements of society constitute the second form of interoperability, which can be considered as ratio of parts to the whole, which is their function of dependability.

Organizational interaction of the bearers of directive and reporting information through the system cultural core mediation, its own system of values that is transformed into a set of moral and legal norms, channels of such interaction lead not only to the complexity of their own bodies, but also induce morphogenetic process leading to the formation of specific morphological organ that focuses on the analysis of management information.

The essence of this phenomenon in the epistemological dimension may appear in a subjectified form; in this case, we are dealing with a «subject - subject» relationship, which is the core of social control. Recall that organizational relations are «one of the manifestations of organizational interaction (along with organizational structures, institutions, organizational processes, units, etc.), which is distinguished by the duration, consistency and systematic organizational interactions, their self-restoration and breadth of content of organizational relationships.

Organizational relationships (both organic component management relations) reflect the stable relationship of elements of



organizational management structure, that is the place, functions, rights and responsibilities of each employee (or division) as well as specific technological, economic, industrial and organizational and managerial relationships between them.

By the nature of the interaction organizational relations of subordination and coordination are distinguished; by the content – they are exceedingly various [77, p. 131]. This is due, primarily, to a large variety of purposes and values that guide the actors in their social management relations (wealth, power, knowledge status, prestige, justice, kindness, friendship, etc.). It can be said that in the research we need to make real social transformation of phenomena of life, because it is putting pressure upon people and they experience it, into a form of knowledge. «Relations –Marx and Engels wrote in «German Ideology» - in law, politics and so on. – in consciousness – become concepts» [See: 275, p. 100].

The «subject - subject» relationship is the essential feature, the criterion of distribution of types of management, because we believe that the management of biological systems is based on the «subject -object» relations, and of technical ones – on the «object - object» relations. M. Kagan, describing the connection between communication and public relations, wrote that there is «a communication, but it is not described in terms of «form» and «content» or «personification», but rather in terms of «process» and «product». Communication is a real procedural activity; while public relations are the type of relations between its participants, that becomes the structure of society and, being formed in the process of practical communication between people, also condition it» [92, p. 136].

Content of social control is also the focus of management philosophy. In our study, social management content means not a substrate of social phenomenon itself, but its internal state, the set of processes that characterize the interaction of elements forming social world among themselves and with the environment and determine their existence, development and change; in this sense,



the actual content social control acts as an organizing process that is indifferent to the form, and the «outer form to it, meaning something other than form» [106, p. 86].

Organizational or management activities of any subject of management or organizations is very far from natural objects, such as technology and processes, such as communication between people. It deals with models of systems and processes; Academician M. Amos convinces us in that, «reason should be seen as an apparatus of management of complex objects according to the criteria of optimality through the actions with the model. In this case, the word «apparatus» implies both structure and algorithm» [10, p. 51].

Thus, we conclude that logical structures are the subject of organizational activity of man; therefore, it is their form of being that would determine the form of management activities. Terrestrial there's little left as governor operates archetypes, ideas, values and meanings. Maybe this explains the widespread opinion that the supreme headship of the kingdom, empire, state governors are considered to be the Vicars of God on earth, as they operate facilities that belong to the space of the third world.

This means that for the management of terrestrial forms of life, the first, for example, biological systems, as well as the second nature, such as technical and social systems, are merely variations of the same subject field of professional activity.

Next, we note that in the study of natural forms, we are dealing with a reasonable human activities, and, more precisely, with work and socializing; in the study of simple transformations, we encounter forms with natural (social) the essential powers of man; in the study of transformed complex forms, we deal with social relations; in the study of naturalized complex forms we encounter the «iron man» of K. Marx.

We believe that the core of organizational cooperation in the management of social systems is the decision-making process that focuses on solving the problem situations that make up any



organizational process. From the management literature are known several options of so-called management cycle that can number from three to several dozen stages of decision-making [95, 544]. If to present it in a concentrated form, then it is – mastering the problem situation by the following algorithm: diagnosis – modeling – forecasting – design – construction – organization – performance (therapy) – correction – prevention.

Thus, the content of social management unfolded before us as a set of organizational activities, covering all participants whose activity takes place in the social space. «In general – as noted by A. Bogdanov – the whole process of man's struggle with nature, subjugation and exploitation of natural forces is nothing but a process of organizing the world for a person on behalf of their life and development. This is the objective meaning of human labour» [64, p. 70].

Forms of social control, thus specifies the space in which it operates, so here we are dealing with valuation and determination of semantic and relevant to them value - oriented form of government, based on selection of values, and innovative forms that is being reproduced by the sensegenerating.

Based on the dual nature of social control, social systems have two contours of management: the value and meaning. The first channel is based on the experience of world and national culture and, thus, preserves it; the second – provide innovative personal meaning, leading to the development of a social system. Culture here is the factor that is external impetus to action. On this basis, a person obtains double value-sense determination of semantic behavior and can act as a conservative and as an innovator of social systems [45].

Value form of social control is directly related to culture, previous history and mentality of the people. This results in concerns about threats to national culture and education related to the gradual replacement of the term «governance» by concept of «management» and as the consequence the erosion of Westernization and national characteristics of social relations. However, some national mental



characteristics of different cultures cannot cause rejection of the objective world universally recognized achievements of modern management as type and management philosophy, which, being social in essence, declares human dimensionality as a higher value rather than actual production itself.

To cultural forms of social control belongs impact on people based on the energetics of cultural values, while the mechanism of its action is based on tradition, ritual, using the value objectified substrate – a system of human values that form the core of cultural civilization or a particular community. Recall that the value in the literature is «any material or ideal thing that matters for the person for which they works, uses their strength, and lives» [228, p. 203].

The specificity of the impact of values on people consists in not showing distinct signs of activity, since the human consciousness fuels itself. Qualitative leap is possible only through collective thinking, which, unlike the human mind loses the negentropy features.

The main function of the value determination is to provide interaction between man and society. The action mechanism of subjectification is based on unconscious processes that take place in the human psyche, where information coming from the external environment undergoes constant exposure and comes out in the form of many spontaneous ideas.

The interaction of the individual with other members of the social process is provided by two actuators: the first one is based on the division of social labor, and the other acts on the basis of patterns of interpersonal communication through time-space in the structure of personality and habitus/traditions of the society. The means of the management of the individual behavior is the archetype of human activity products affecting mainly the mental level of the individual and forming the so-called egregors, complementing the noosphere from the planetary level.

Values (cultural core) in the structure of society or other system make the product – a set of moral and legal norms, the carrier and

talisman of which is the governing body of the system. This coincides with a certain number of transitions: needs – interests – values – norms – motivation – incentives – action. The target product of the value regulation is to ensure homeostasis of the social system, i.e. the sustainability of existing structure.

Semantic form of expression of management is something completely different, opposite to culturological form; as sense determination of social systems management is subjectified substrate of the sense generating mechanism and reproduces the dependence of the subject and object behavior from senses created by them. It, as an agent of influence, has a meaning that is interpreted in modern pedagogical dictionaries as: essence, most important, the basic meaning of the phenomenon or behavior; personal significance of different phenomena, messages or actions, their relation to their interests, needs and life context in the whole of a specific subject [229, p. 61].

The mechanism of action is based on a form of semantic information sign products that raise a person to the laws of logic and semantic fields of the universe. This is the source of the noosphere content formation «from above».

Role of the subject's activity in the generation of meanings is emphasized by V. Frankl, M. Chyksentmyhali, S. Maddi, J. Byudzhtental, J. Kelly, L. Thomas, C. Harro – Auhstayn, John Shotter. Determination of sociocultural meanings is noted by Jung, M. Chyksentmyhali, F. Phoenix, R. May, J. Smedslund, L. Thomas, C. Harri – Auhstayn, R. Harry, special importance to training and self-training in the generation of meaning is emphasized by F. Fenix, L. Thomas, C. Harri – Auhstayn and J. Shotter. Lewin points out the influence of other people on the generation of meanings (valences) as a command, prohibition or example.

Semantic form of social control integrates the individual in society and does not depend on the state of the environment. This ensures technological connection of social space and human society. Its source and bearer is a personality, and its mechanism



of action is «approved» by the principle of external complementation, creating a positive feedback link in the system of self-regulation and brings a social system at a new level of development and functioning.

Managers and subordinates, because of different social roles in an organization, use in the social space of society the semantic product of their own production in a different way. Innovative forms of social control are based on psychological mechanisms of generation of meaning: life imprisonment relationships induction of meaning, identity, insight, comparing senses of meaning.

The product of a sense generation is a semantic sphere of personality, consisting of a series sense forming structures that form specific connections and have their mechanism of operation. According to D. Leontyev research, it has primarily to do with such leading institutions as personal meaning, semantic unit, motive, disposition semantic, semantic construct personal values [249]. Functional analysis demonstrates that this type of determination is manifested in human behavior as meaningful regulation.

Thus, the identity as regulatory system is constituted by the subject's functions of separation itself from environment; separation, presentation and structuring by it of its relationship with the world and submitting their life to a constant structure of these relationships, as opposed to changing impulses and external stimuli. This is a common function of semantic sphere of the individual. It is this function that holds subjectified semantic field that realizes in the internal dimension the process of determination of a person's behavior. This dynamic semantic scope the author examines as the principle of organization and the unit of analysis of semantic sphere of the individual.

That is why the philosopher of management must make constructive criticism of existing but unsatisfactory means; study management and address new realities, such as virtualization of business corporations and their management. Today in this area the



attention is focused on virtualization. According to M. Castells, “The main thing isn’t formation of virtual reality, but rather construction of real virtuality». The practice of modern management fully confirms the validity of this thesis, if to look at modern pyramid schemes, savings trusts, «Elite-centers» corporations like «MMM» by Sergei Mavrodi and other virtual products of management activities that distort the organizational matrix of planetary life [260]. In this way a qualitatively new symbolic environment is formed. Virtuality becomes our reality» [204, p. 349, 350–351]. Mutative sociocultural reality creates within us new information culture, which affects the control system of society and human behavior, including the philosophy of management that is at its core.

To the discussed above, we can add the analysis of subjectified and objectified form of the management reality. In the monograph we submitted these forms more fully, but here we only indicate their presence and give an overall assessment of the role and place of social control in the existence.

Subjectified form of management of social processes is represented by materialized elements within the structure of human consciousness. These are phenomena, such as organizational awareness, organizational thinking, organizational vision, the organizational culture of a person.

Deep foundation of any human activity is its consciousness. Productive organizational activity requires advanced organizational consciousness. It is an indisputable fact from which we start the analysis of subjectified forms of social systems. Therefore, organizational consciousness is of the key significance for the organization of social management. Although, it has not become the object of management philosophy yet; it has to become though. This type of consciousness is characterized by exceptional consistency, because human mind is perhaps the only totally, that is one hundred percentages, negentropic process on the planet [31].



At the core of the social life of any organization is a system of management orders. You can always explore the reasons for which these orders were given, non-fulfillment of which may be accompanied by certain social contradictions. The life of the community, especially during transition periods, and it is clearly seen in the case of Ukraine, is full of contradictions. «Such mistakes of individuals and groups are always possible and will repeat unless the organization consciousness is formed in a precise and rigorous science» – Alexander Bogdanov wrote [65, p. 124].

The very first time in Ukrainian philosophical thought H. Kozłowska developed a holistic concept of organizational consciousness, the essence of which is to create a generalized picture of the existence of this phenomenon, which is defined as a mapping, understanding and experience of human influence organizational ideas, knowledge, attitudes, values, behavior, feelings and so on the formation, regulation and improving environmental and their own life [215].

In a process of morphological analysis, she revealed the structure of organization consciousness, which is seen in the personal and social dimensions, and proposed generalized model of organizational consciousness, all elements of which (organizational attitudes, principles, norms, values, etc.) are organically interrelated and organizational belief systems, organizational values and values are defined as its integral kernel [215, p. 82–107].

Based on the functional analysis of organizational consciousness, obtained the rational justifications the system of functions of organizational consciousness and the original conceptual model of its operation is built, which is based on the so-called «management cycle» locked on target [215, p. 107–127].

Management philosophy is to offer to form a specific world view and nonlinear thinking, whereby the manager can understand the nature and content of the modern era of technological transition to an information civilization, to reproduce in his own consciousness driving mechanisms and form the innovative



behavior principles, which are moving forward today the international community. It not only comments on the state of the environment, which is a form of life for it is stable or desirable, and its actual impact on management, but also explains why it is that way and not in another, and, most importantly, explanatory principle determines the next step of development.

The era of industrial society today gives information era. This means that its laws are canceled out, and management philosophy clearly shows us the change in ideals of social development and transformation processes in the environment, which directly depends on the state and development of man. «The system that controls its own outside world, eventually take possession of itself» –rightly points out N. Luhmann [256, c. 612].

Alexander Bogdanov explained from the point of view of management organizations, where the environmental problems emerging from. «Where a person intervenes, nature keeps doing its work. The fate of the complex, which it seeks to preserve or eliminate, is defined, as before, by the sum of all the terms, all acts of environment; the human effort is only one of the components of this sum», [64, p. 166] – he said. Excluding environment, the action of a man reveals a «limited value of «human» selection as partial rather than full control mechanism» [64, p. 167].

Summit in Rio de Janeiro in 1992 and the World Summit on Sustainable Development in 2012 clearly demonstrated that the evolutionary mechanisms have raised the international community to a higher standard of living. On the one hand, a person's life becomes more difficult, but on the other, we have new opportunities to be immediately used to acquire philosophical principles forming the general theory of management. The fact that in terms of a particular field is a useful and positive, is not always optimal for most systems. Examples are several pressing issues of our time: building of nuclear power and military – industrial complex.

Value of management philosophy is that it takes us to an understanding of the changing priorities in the management



development and change of the principles of social development and techniques of improvement of planetary life infrastructure. Today it is clear that the principle of dynamic equilibrium, which lay at the heart of global economic development and to which we had worshiped till the end of the twentieth century, has outlived its time and gives the way to the principle of Sustain imbalance (E. Bauer).

Objectified form of management of social processes is present outside the control consciousness of the subject that is embodied in the structure of society. So, we must turn to the analysis of social control objectified products that occur in the structure of the social whole.

The main objectified product of management system, which operates on the side of any society is a unique creation – social organization, which takes place in the space of social interaction of people. In the late 80's – early 90's of last century, Douglass North, who later became a Nobel laureate in economics, has published a series of papers that relate directly to study the role and principles of the organization [Op. at 292, p. 53–54].

Another product of the process of objectification is the legal basis of human behavior in the social space. This naturally raises the question of where does this regulatory system come from? The answer here can be only one: if we consider the system of values a process or functional double social system, sooner or later it has to go and rest in the product. So there may be a product of a system of moral and legal norms, the media and talisman which is a system of governance of the organization. This observation coincides with the practices of sociological and psychological literature, in which a number of fixed pattern transitions: needs – interests – values – norm – motivation – incentives – action.

The experience of organizational structures is also objectified in society. It is about creating management giants of industry and engineering, especially automotive companies, such as motorcar giants «Ford», «Chrysler», «Mercedes», «sale», etc. Today is the experience of large companies diversified into small ones, more



adapted to the market conditions at the onset of stage innovation economy. Large corporations are typical business organization of the industrial era.

In practice, we find not only positive but also negative examples of organizations mutants. Mutation in the discourse of social science organization explained Alexander Bogdanov, who wrote: «The power of the body is in strict coordination of its parts, in strict accordance of separated and interrelated functions. This correspondence is kept at growth of tectological differences that is a constant but not infinite process: there comes a point when its completeness cannot be longer kept and it begins to go into decline. Parts of a whole are getting «too different» in their organization, to such degree, that diverge by the tempo of life and the strength of their relative resistance to the environment. This inevitably leads to disorganization, slower or faster, depending on the amount of conditions» [64, p. 24–25].

Theoretical products as separate and independent entities – also have to be referred to the sphere of objectification of social management. Among them, the proportion belongs to organizational ideas, paradigms and concepts of management, finally, to young management theories, which are gradually gaining heuristic strength and credibility. As for the conceptions of management, there are really a big number of them offered by practices of social management [463].

They appeared under the influence of the dominant ideas in that time, methods of activity and attitudes. In the full match with these dominants the images of organizations themselves were changing. The philosophy of management today can already store to its treasury for further processing a range of such objectified products for collective storage and the production on their basis new models. It is about [369, p. 34–38] organization – the labor process (F. Taylor) organization – the car (A. Fayolle, L. Urvik et al.) organization – the community (E. Mayo, F. Roethlisberger), socio-technical model of organization (Tavistokska School) organization



is a system (J. March and H. Simon) organization is an organism, the bureaucratic model of organization (Weber), the natural organization (T. Parsons, R. Merton, A. Etzioni) the political model (M. Kroz'ye), the organization is the case (GM Alshulyera), the organization as a system of constructs (S. Nikanorov) and others. Of course, the model of organization is not a method, but the viewing angle advisable to look at the specific problem to choose more precisely the methods to address the problem.

Specifically, should be mentioned such products of objectification of social management as the concepts and practical generalizations related to the definition of the phenomenon of «social management» which are used in everyday life by the large number of practical managers; they are reflected in professional literature of social systems management.

There are those generally recognized schools of management: Japanese, American and European. The Japanese approach to management in its essence is conceptually different from the U.S., because of the different world outlook, the view on role and the place of man in the world and cosmos, the type of thinking, philosophy of the organization of life, the nature of socio-cultural environment. Japanese system considers a person an integral part of the cosmos, which should not disturb the equilibrium, but American and European – find a man as the center of the universe, so he has to act pragmatically in favor of self-interest.

To the historical discourse we relate the emergence, functioning and development of professional education of managers. The first business school in the United States was founded at the University of Pennsylvania in 1881. American specialists divide the history of business schools into three periods: the birth and early development (1880–1914 years), the expansion and diversification (1914–1940 years), and revaluation reorganization (from 1940 to the present).

By 1890, only three universities: in Pennsylvania, Chicago, California had courses in business management. First time the



scientific management course was developed in 1881 by American scientist Joseph Wharton. In 100 years H. Koontz and C. O'Donnell published their work «Management: Managerial Functions Systematic and Situational Analysis» which was translated from English and was published in the USSR in 1981.

As the important product we are considering the history of social management that is analyzed by researchers and «thrown» to the depths of the historical memory of the international community and the individual who is interested in these issues. The stages of maturation of social management up to systematic form are submitted in doctoral research of Shavkun I. [517].

The degree of the mind involvement in the development of social management, especially through the new types of social reality, practically unlimited, because man accumulates mind in the form of collective mind – the noosphere. Collective mind in each moment of time identifies in these forms the core as the most important ideas, stereotypes, concepts that make by their sense the opposite effect on the activity of individuals, classes, social groups and institutions.

Management philosophy creates and objectifies in the information matrix of society the specific semantic field for the development of the theory of social control. Management philosophy has to provide categorical apparatus for developing a general theory of management, since language is a means of building of social structures. «Language in essence, according to A. Bogdanov, is organizational process, and moreover universal. With its help any practice of people in their collaboration is organized: using the word, common goals and general means are set, the place and function of each individual are determined, the sequence of actions, and so on. But with the help of language all knowledge, all thinking of men is organized: the help of words experience is collected, concentrated and shared; its «logical» processing has to do with verbal signs. Language is the primary



technological method produced by human life; therefore, it is a living proof of possibility of tectology» [64, p. 110].

We remind that theory is a form of the organization of credible scientific knowledge about a set of objects, which is a system of interconnected statements and evidences and includes the methods of explanation and of the prophecy of phenomena and processes of the subject area, the all phenomena and processes described by this theory. Any scientific theory, first of all, consists of interconnected structural elements. Secondly, has in its initial base central a system forming element.

On the example of the development of the theory of management of social-economic systems (SES) professor of the Institute problems of management of Russian Academy of Sciences D. O. Novikov proves that the main methodological result of true theoretical work includes two provisions [324]: First, that the central element of the theory of system-of SES is a category – «of the organization» and its structural components are: 1) management tasks, 2) a scheme management activities, 3) management conditions, 4) the types of management, 5) management subjects, 6) types (methods) of management, 7) forms of management; 8) management tools, 9) management functions, 10) factors that influence the effectiveness of management; 11) management principles, 12) control mechanisms. To provide the filling these categories by organizational sense is the most important task of a young management philosophy.

Objectification as a process generates information products that require a suitable place and conditions for their preservation, storage, synthesis and use. This is a fact. And here again is appropriate to recall the informational matrix of the social world. It is the best storage one can't find, because it makes available the accumulated products for everyone who is friends with technological progress and has its appropriate level of spiritual production technologies. The «Internet» and use of it is the more obvious proof.



On the basis of the material, considered in this section, one can make the following conclusions about the effectiveness of the analysis of social management offered by us above the ideological bases of formation of the general theory of management of technical, biological and social processes, such as: firstly, we have proved that social management came from the depths of self-control of the social world thanks to human mind, as its needs required satisfaction here and now, but natural processes could not concentrate on their satisfaction.

Second, proposed in the previous sections philosophy of management firmly secured philosophical reflection of nature, essence, content and forms of management of social processes and allowed in expanded form submit a logical nature of the phenomenon, its semantic nature and highlight the organizational and administrative activity as its content, provide value-semantic determination of human behavior in the vertical plane that coincides with self-unfolding universe.

Third, formed by us philosophical discourse of subjectified form of management of social processes absorbed the professional requirements for professionals who intend to work professionally as managers of social processes, as we have consistently reproduced by means of philosophical analysis the major characteristics of a person capable of organizational interaction with other subjects of social action based on specific organizational ideology.

Fourth, the phenomenon of organizational interaction materializes in space and time and has its own being, regardless of the subject of social management in the form of ideas, paradigms and concepts of management and reaches maturity as theory of social management that reflects organizational climate and organizational culture, management styles and many other parametric features of objectification of phenomena of social management in the external environment on the basis of «subject-subject» relationships that provides organizational interaction based on value-semantic determination.

5.2. Morphological characteristics of social systems management

The objective of this section is to analyze the morphological component of social systems management that supposes to highlight the ontology of phenomenon, its elements and structure of the management subsystem.

«Social system» is a quite common and ambiguous concept, because in a field management it is used along with the term «organization». Without entering into the debate on genus-species relationships between these semantic units, we will define their affinity and in further philosophical analysis will consider the term «organization» as a unit of structural and functional analysis. Its content «is a combination of people and other resources necessary to achieve certain goals based on established rules and procedures, division of labor and responsibilities» [473, p. 25].

We are aware of other opinions on this. For example, R. Daft admits that «organizations (organizations) are social integrities that are in some way structured systems of activity caused by specific objectives and related with the external environment» [145, p. 691].

Slightly different view on organization has I. Herchikova who considers management to be an organization (organ) of governing. In popular among managers textbook «Management» she writes: «Normally, as an organization is understood the structure (composition), in which are held deliberately planned measures to achieve common goals. Organization is a kind of anatomy of enterprise, management – its physiology, or organization – the statics of case, management – its dynamics. Since the management itself also has a certain structure, then with organization management we can speak about organization as a body, a subject of administration and management of organization is considered to be the object of management. In both cases to such terms, the term

«management» is applied. The governing body is often understood as an administration that introduces the company and acts on its behalf» [124, p. 19].

Of course, organizations have their own structures to provide coordination and monitoring of the activities of their departments and employees. The structures of organizations differ from each other by complexity (the degree of distribution of the activity on various functions), formalization (the degree of use pre-established rules and procedures), the ratio of centralization and decentralization (the level at which management decisions are taken).

To deepen the analysis of the research subject, we need to submit the chart of organization, in which determine the place of management system and its further research. This is not a simple question, as the literature proves there isn't a unanimous approach to the structure of organization. It is submitted as a «black box» of the traditional «entrance», «exit» and «feedback», or heuristic model in which in interaction are «the subject of management» and «the object of management».

Hereinafter, is even more interesting. In dictionaries, reference books and textbooks the only one element is served, while the other one is forgotten. For example, in the professional edition of «Dictionary-Directory Manager» (1996), edited by M. Lapusty filed only the subject of management of governing. In this case, the publication pointed out that «there is no subject of management, in general; there is the subject of management administration in a certain object of management» [414, p. 471]. We think that clarify it in such conflicts should and can management philosophy. To do this, she can design models valid for different types of organizations from the public for commercial purposes, and to submit their structural and functional portrait.

Therefore, based on the needs of structural-functional analysis, we build a heuristic model of a typical organization, whose morphology as a subject of management has a specialized body of managing an organization with its specific cores – management



structure and the object of management, morphological base of which is the individualized structure of organization. Between them there is a close relationship: organizational structure reflects adopted in it distribution of labor between departments, groups and people, but governance structure provides coordination mechanisms to ensure the effective achievement of common goals and objectives of the organization [473, p. 87].

In addition, to the content of this pair of elements we have to add a few more important, from the standpoint of liveness of formation, elements, namely: a) a person, as the bearer of objectified content, the source of innovative energy and the driving force the system of social management, what we have drawn attention above; b) feedback as a body in the management system; c) ties of management, providing relationships and creating the internal environment of the organization; d) the normative system that regulates the behavior of participants of the organizational interaction is the core of their organizational culture and professionalism; e) informational infrastructure of the organization that provides organizational interaction of object and subject of management constant – communication channels; h) management activities products that circulate in channels of the organization of governing.

Next, let's consider each element separately, since the absence of at least one of them violates the integrity of the organization, and it cannot function. Let's start with the people that create the organization staff and with whom, on the basis of «subject-subject» relations, the management team headed by the leader interacts. Their possibilities we have considered above, in section that is dedicated to subjectification of management system. The subject of management as the object of management can be considered as concrete people: Petrov, Ivanov, but the best solution in terms of the purpose of research, will analyze both of them, as the social collective bodies of a whole. In this case, we change the angle of view on the subject and object of management; we are bringing their meanings to their actual current state. Under these conditions, the



«subject-subject» relationship turned into relationships between the structures of the organization, and now we have to examine them the principles of structural matching. In reality the management activity is the functioning of the management system.

Management system is divided into three subsystems. The first subsystem is actually a management system. The second is information and behavioral subsystem of management system. Third – a subsystem of self-development of management system that has two separate components [See: 95, p. 31–36].

This characteristic of the subject of management cannot be completed because today any system of social management has a number of public associations by acting on the basis of external supplement affect the management decisions [¹]. As it turned out, in this case at the state level the principally new type of organizational interaction between the state and civil society is forming, it's called «state and public administration».

Heuristic model of the system of state and public administration consists of two equal components: from the state – authority institutions, apparatus, mechanism of government, the principles of organization and activities of the state administration; from civil society – analytical research centers, centers of social partnership, community advisory councils, colleges, institutes or organizations of civil society with the state authority conventional principles of organization and activities of civil society. In the system of the government such assistants are tens of thousands.

The management structure is characterized by such notions as complexity, levels of formalization and centralization, coordination

¹ We investigated this moment in the course of research topics «Self-regulation of the social organism of the country» (state registration number 0105U000447) and «Social organizations as a factor in the democratization of society» (state registration 0108U000361), who performed at the National Pedagogical University named after M. Drahomanov for the Ministry of Education, Youth and Sports of Ukraine. The main results of this work reserved during the 2010 – 2012 in PhD dissertation S. Popov on «Feedback in the paradigm of self-regulation of social systems: theoretical and methodological analysis», published in several books collectively and individually, and set out across the web.



mechanisms. In many organizations they have developed more historically than in the result of deliberate efforts directed to their development and improvement. Despite this, there are two common approaches that were most prevalent.

The first is a formation of structure of management on the basis of the internal structure of organizations, the division of work and the rationalization of management – hierarchical type. Second comes from necessity of constant adaptation of the governance structure to environmental conditions – organic type. It is clear that the second type of management structure is more consistent with variability of transitional socio-cultural environment. The organic type of management structure rejects the need for a detailed division of labor by types and forms a kind of relationships between actors of management that were not dictated by the structure but by the character of problem being solved.

The management structure has specific types of morphological skeleton and chooses it depending on the internal and external factors. At the beginning of the XXI century widespread types structures of management in social horizon are: linear functional, divisional, project, matrix, brigade, virtual and some others, but their searching is not terminated [473, p. 96–108].

Now consider the object of management that in the horizon of social management can operate according to the «subject-subject» relationships principle. It is also a collective body that has its own structure. We mentioned it above as the structure of organization. Holistic definition «structure» introduces such characteristics as integrity or unity. The structure must comply with three conditions: 1) integrity, 2) transformation, and 3) self-regulation. Already I. Kant found that the structure is a position and connection of the parts of any organism formed with a certain purpose. Ideal system has the ideal structure.

Structure of the organization is the fixed relationships that exist between departments and employees of the organization. In theory and practice of management are two concepts associated with the

structural approach to joint activity of people in the organization. These are the organizational structure and management structure of the organization [473, p. 87].

The structures of organizations have three main functions. First, they are intended to create whatever the organization supposes to produce, in other words, to achieve their goals in effective way. Secondly, the structures are intended to minimize or at least regulate the impact of individual behavior in organizations. The structures have to provide agreement between people belonging to the organization with its demands, and not vice versa. Thirdly, the structures are entities with which power functions are carried out (structures also establish or determine which positions are the main and defining in terms of hierarchy), in which decisions are taken (the flow of information for decision-making is mainly determined by the structure), and which is performed the organization's activities (the structure is a place of action of the organization) [Op. for: 507, p. 94–95]. According to vision of R. Hall, «the organization teaches, casts and convinces its members conduct themselves in typical situations, based on the requirements of their position» [507, p. 68]. Furthermore, it determines human behavior, taking responsibility for her real life, provides the career development.

There is a problem of typology of organizational structure as the multiplicity increases by the degree of development of society they undergo a differentiation also within each type; that is the process only builds-up. The need for the typology of organizations occurs when the accumulation of research data and representations necessitates the construction of a unified picture of the social phenomenon in most large scale and varied forms.

Full implementation of this dual requirement (both volume and detail) would show their own classification and solving all issues. From the literature we know the classification of A. Prigogine [369, p. 61]. A. Kravchenko and Ivan Turina distinguish between technical and social systems of two types: open and closed [225, p. 357 – 372].



R. Hall considers that the terms «classification», «typology» and «taxonomy» are interchangeable, although in the strict sense have differences. As a typical pragmatist he considers it necessary to typologize an organization or structure according to the «traditional, folk or common sense typologies» [507, p. 77]. The leading type, as he admits, is the division into commercial and non-commercial. The second form can be, in his opinion, the division according to the industry principle: education, agriculture, health and others.

Another classification of models and structures is presented in the American encyclopedic reference book «Modern Management»: among models – a bureaucratic, behavioral, organic, «organizational nebula», among structures – a functional, small (the range of products), hybrid, matrix, network and others. [421, p. 154–159]

T. Parsons gives the typical simple scheme, it is based on the type of function or purposes that organization serves [Op. for: 507, p. 78]. In this analysis, T. Parsons affects the relations between organizations and the wider society. He distinguishes four types of organizations by the contributions they make to society.

According to Etzioni, there are three types of power – forced, normative and remunerational. There are also three types of agreement – alienated, instrumental (planned) and moral. Due to scheme three-on-three comes nine possible types of organizations, most organizations fall into the «congruent» types. These include force – alienation, reward – calculation and normative moral categories. Noncongruent types such as forced-utilitarian tend to move towards the congruence [Op. for: 507, p. 79].

Of course, the literature can provide a number of such examples. Key, in our view, is that the management philosophy, as well as individual researchers, is free in classification of organizations, so depending on the purpose of research, they may choose their own criteria and offer methods of organizing and generate original varieties of systems.

A different matter is the hierarchy of levels of social systems that depend on the organizational levels of social interaction



between people. Here, however, the researchers did not have space for fantasy. The manifestation of forms of governing the education in the vertical plane should be attributed to the level of management. It can be found at the morphological and functional levels. In the analysis of morphological component of management of education, it turns out that we can talk about: 1) global / world, 2) transnational / interethnic 3) state 4) industry, 5) the territorial / regional 6) local 7) corporate, 8) personal (self-management, life management, time management, stress management). It should be noted that the organizational levels are coinciding with levels of biological systems, indicating their affinity.

Thus, in the course of organizational interaction in the space of any social system are formed not only the relations «boss – subordinate» but also differentiates itself an organizational basis – structure, leading to its hierarchy and the formation of a new body – a deepening of morphogenesis is taking place. Formation of the management subsystem occurs through «free choice, through which the Future that exists as a potential diversity affects the Present by changing the Past that hangs over them» [315, p. 386].

On the basis of occurrence of the governing body, the interaction between members of the social system is modified, which we consider as a constant influence at each other, that we analyze using the words «act» and «sanction».

In this respect, T. Parsons wrote: «When the influence on the action of others in the system is transformed into institutionalized expectations associated with the role (some units of system), we have the source of power» [341, p. 572].

Social systems are set in the time and much experienced of its creators. Organismic idea explains this by the fact that organizations have their own organizational life. This observed by researchers long time ago, and many researchers and consultants use the term «life cycle». There were many attempts to study life cycle of organizations; the greatest recognition has the scheme of Ishaq Eydzesa. It is somewhat improved by A. Prigogine and it came to



the following: a) increase b) maturity, c) aging [369, p. 85]. Our researchers think that this process goes through more steps namely: «birth», «childhood», «youth», «early maturity», «final maturity», «aging», «revival» [150, p. 45–46].

Social systems as a functional structures that are in the depth of field life forms, counteract, sick, mutate and die, that is bankrupt and leave the scene of collective life.

Mutation in organizational settings, leads to pathology in management system that strongly heated by flame power and the desire to possess it individually [369, p. 96–103]. Pathology occurs in the structure of the following conditions: domination of structure over function autarky of units, incompatibility of personality with function, bureaucracy. By the way, in the literature are singled out several types of bureaucracy: perfect, pseudo-bureaucracy, representative and forced [161, p. 231, 326, p. 116–117].

The pathology can occur in the organizational relations, namely in case of conflict, unmanageable, subjectivelessness. The dominance of personal over official relations; the objectives blurring; the conspiracy of leaders for their own enrichment as part of the whole.

Pathology can cover the scope of decision-making: pendulum decisions, duplication of institutional order, ignoring the organizational technology, gap between the decisions and their implementation. Stagnation, repression of functioning, and so on. Professor of University of Jerusalem I. Hahnur gives an interesting description of a few management «pathologies» that violate the stability; he expressed them in the form of syndromes [239, p. 25, 556].

Feedback in the system of social control that functions in the paradigm of «subject-subject» relationships, as the subject of morphological analysis, explains a lot in specificity and mechanisms of functioning. Cause and effect are reversed in organizational interaction. Direct relations and feedback in functioning form the circuit. Therefore, it is important to clarify the philosophical

characteristics of feedback. S. Popov, who specifically examined the feedback in the paradigm of self-regulation of social systems, delivers a comprehensive description, particularly focusing on its two forms: positive and negative [358].

Relationships of management are the functional bodies in the management system, and they cannot be ignored. They provide relations and create the internal environment of the organization. Without them, the system is stationary and organizational interactions are impossible. All elements are on the spot and there is no movement. Elements are services, groups and workers who perform certain management functions in accordance with the adopted distribution of management tasks, functions and operations. Moreover, the organizational interaction is concentrated «in relationships », because they are, according to A. Bogdanov, efficient functional organ [64, p. 35]. However, they «may escape from the immediate observer in those parts of both systems, where they are fairly well balanced» [64, p. 35].

Thus, the relationships between the elements are supported by relationships that are usually divided into horizontal and vertical. Horizontal relationships are characterized by coordination and are usually tier. Vertical relationships are the links of submission, and the need for them arises at management hierarchy, that is, when several levels of government are presented. Besides, the relationships within the governance structure can have a linear and functional character. Linear relationships reflect the movement of management solutions and information between the so-called line managers, persons entirely responsible for the activities of the organization or its business units. Functional connections have a place through the movement of information and management decisions on certain management functions.

Relationships built on self-regulatory body of social systems – homeostat. We have submitted about it earlier material and will consider its functioning in the next section. Here we mention only that it is an indispensable element of management structure of any



social system. There are as many self-sufficient systems, as bodies of self regulation. They, homeostats, ensure the function of self-reproduction and development of the systems.

The normative system of social management as a part of morphological analysis maintains the rules of regulation of behavior within the whole. It does not directly form the social relationships; moreover, does not change their content, but positively effect the organizational interaction of control – it's legal, administrative, ethical and other norms. Their main purpose or function is dictated by the fact that they set certain forms and means of functioning of administration; with their help the subject of management directs and organizes a social livelihood of the whole – organization.

According to T. Parsons, the first type of standards related to regulatory control of activities refers to the assessment of objects from cognitive view and includes what we call «universalism». Standards of the second type are related to objectives of the process of action, to that, which in terms of the variable of their model we called the activity or efficiency. The third type of standards is called «one that integrates the system»: it defines the expectations of the unit of solidarity with other units of the system. And the fourth type of standards associated with the support or regulation of changes based ascriptive qualities that are the starting point for other activities with the help of rewards and punishments [50, 341, p. 461].

Moreover, further T. Parsons separately considers even norms of sanctions for members of social interaction – these norms of sanctions correspond to four basic types of rules: 1) «approval», 2) «response», 3) activities that integrates the system 4) «respect», characterized by attitudes of «diffusiveness» and «neutrality» [341, p. 461].

That is the possession of normative base of management is the core of professionalism of manager, and its effective use in practice – an indicator of the level of its organizational culture. By the definition the management literature, organizational culture – «a set



of the most important concepts that are perceived by members of the organization and are reflected in the values of the organization that define for people the orientation of their behavior and actions. These values, preferences are transmitted to individuals through the «symbolic» means of spiritual and material organizational environment» [See: 95].

Researchers distinguish three levels of organizational culture, namely, surface, which assimilates the symbols, technology and architecture of the buildings; undersurface, that holds the values and beliefs of the staff; deep, regarding the basic assumptions that are difficult understood even by the employees of the organization.

Information infrastructure of organization that provides organizational interaction of object and subject of management of constant communication channels is almost the only element of management system, materially separated from the environment. Information infrastructure of organizations «rose» [422, p. 81–82] on the basis of information matrix of the social world and now becomes acute, as the maternal base has activated, that takes maturity; while the planetary world goes to the information unity. So, today, any organization is the «electronic office» [292, p. 172]. The most massive of projects is «Electronic Government» [375].

Products of organizational activities that circulate in channels of control are usually ignored by researchers. If they are not taken into account, then the management system is empty and organizational interaction – unproductive. This means that the mechanism of management is absent or idling. This is an interesting point in the study of the morphology of social management as «subject-subject» relationships provide that bottom-up and top-down move with the same products, namely, setting of problematic issues and adopted administrative decisions or proposals.

There are direct products of such activities, and there are those that occur as a multiplier effect, such as the management team, which is usually formed in sustainable management systems. It is



outside the structures, and intra-team role in it as close to the personality characteristics of workers [369, p. 687].

The authors of management decisions can be individual leaders as well labor groups. This is well illustrated on the example of Japanese quality circles. Moreover, group decision making has several advantages over the individual. The reasons of this lie beyond the problem field of our research. For us the important thing is that management decisions are a concentrated product of management process at its final stages, and it absorbs all resource and energy potential of the system.

So, management system morphological analysis implies several important conclusions. The complexity of the study of the evolution of this system is that it is not an object with the inherent deep integration, as we say, a man who clearly morphologically and functionally is separated from the environment. In this case we are dealing with a system that is represented in a set of its manifestations, and we have done rightly, when out of the empirical material or richness of functional forms designed a system of social management. In this way we obtained its morphological form.

Based on said above, we can assume that under the holistic or complete system of social management we mean the sum of the elements of organizational origin and relations between them that have arisen under the influence of the social division of labor, and that organically interact with each other with the purpose of taking decisions at any organization.

Finally, we will make another important conclusion from a morphological form of social control. Its essence consists in a fact that the morphological structure simultaneously reproduces two components of management, one of which is contained within the structure of man, that is why it manifests itself through their various consumer states; the other one is represented as a set of different objects of the environment, and which is nothing but the sphere of the organization management.



5.3. Functional diversity in contemporary approaches and methods of managing of sustainable social development of the world community

The aim of this unit is the functional analysis of the system of social management, which resulted in clarifying its relation to both internal and external environment. Its essence lies in the fact that management is seen as a set of functions that should be put into a social whole to meet organizational needs. The sum of all functions is the management process.

Research of functions of management is of great practical importance, because they largely show the internal structure of the organization and its governing bodies. The objective necessity of this work requires a clear classification of functions.

The most common classification is now the one that divides the functions into two groups: general and specific management functions. In addition one should distinguish the concept of «management function» and «function of the organization», «structural features of the organization», «functions of the administrative apparatus» and others.

Execution of management functions always requires certain amount of time and effort as a result of which the managed object is brought into a specified or desired state. This is the basic meaning of «the process of management». At the same time, in literature another commonly used definition of process of management is also found; in it the key point is not the functions but the management decision on the development, adoption and implementation of which are directed the efforts and organizational activities of professional managers.

Schematically, this approach is represented as a «black box» with the «inputs» and «outputs», while the management process is



considered of three parts: a) modeling of the object management on the basis of information received from him, and b) the development and adoption of management decisions, and c) organization of implementation of decisions. The last block of information channels is associated with the «entrance» of the production process and thus provides changes planned by management system.

There is the problem of assessing the quality of management decisions. Fullest evaluation criteria solutions system designed for structured problems, concerned in the application economic-mathematical methods. With their help the best solutions are determined, for example, parameters such as the terms breakeven of investment, increase of income or profits, minimization of operating costs and maximization of productivity, and so on. Often, as a criterion for the choice of the solution is applied the time factor and is especially important during the transition period, which is characterized by the instability of the economy and society as a whole.

When dealing with poorly structured problems, the opportunity to evaluate the options using mathematical tools is usually absent. In this case, estimation of solutions may be used the system of suspended criteria, and the evaluation process is carried out in three stages [53]. The first – forming the most important criteria, the necessity of which is absolute. The alternatives variants are evaluated according to these criteria and are divided into groups: meeting the requirements, not meeting the requirements and «doubtful». At the second stage, the analysis is done according to the criteria of optimization, each of which is rated and obtains the appropriate assessment of significance. At the final stage an attempt to establish the dangers that can arise when a selected decision is made.

«Subject-subject» relationships lie in the fact that managers and subordinates share information on equal basis, because without empirical data on the condition of organization no administrative decision will be made, and no decision makes no sense to collect

primary information. It's a circle. The decision is only one – to support in the system of organization the autonomous and the parity information exchange. «If people cannot share information, it is clear that they will not be able to work together, to formulate goals and achieve them» – rightly ascertain Meskon M., M. Albert and Frederick Heduari [286, p. 165].

Conceptual bases of interaction category, developed in the natural sciences and philosophical ontology, suggest that organizational interaction in the field of organizational relationships, as interaction in nature, should determine their carriers, their patterns and constants to explain the causal relationships of basic organizational actions and their generated consequences. The objective cause-effect relations character is the orderly system of interaction of elements of organizational structure that is mediated by specific carriers of this type of interaction – managers and subordinates in a state of «subject-subject» relationships.

"Interaction» is an abstract generalized concept for various forms of mutual interaction and displaying objects of the material world. Interaction is the process of exchange that occurs between material objects and is expressed in the transfer from one object to another, a physical fact – media interaction. In organizational interaction – this is in reporting information – information about the status of subordinate structure in directive – an ideal model of state, in which one should lead the organization. This brings to mind the hypothesis of M. Amosov that the mind should be seen as a tool of managing complex objects according to the criteria of optimality due to the actions of the model. In this case, the word «apparatus» implies both structure and algorithm» [10, p. 51].

Thus, we conclude that the exchange process is the essence of organizational interaction in a social nature in all its forms and diversity, and that the exchange is invariant of quantitative and qualitative transitions in the social system.

Sharing organizational information skillfully, not to say – artificially, entrenched in the information society matrix (matrix – a



two-dimensional array of identical elements (in this case – the information), which is used to preserve completeness of data, promoting adequate solutions to complex information problems. The provisions of element in the matrix are determined by the line number and column number [279]). Here is how we can explain the need for any organization to bring its public importance of the social body in the country.

If the firm has no moral recognition from society, it is removed from the cycle of social media and suffers a fiasco, because the exchange of information forms the subject environment of organization that defines the direction of vector of development of the organization. This is exactly what programs the henocode of social organism of country, society and civilization. This is information substrate of social system that plays during specific metabolism.

The term «information metabolism» [193] was born from the ideas expressed and developed by Polish psychiatrist and psychologist A. Kempinski. Its essence is that the human interaction with the environment (nature, other people, etc.) and the images that arise as a result of this interaction in the mind of a person are for informational purposes. As the life of the body is based on material and energy metabolism (i.e. physical exchange with the surrounding world of substances and energy, and building on this foundation of the body), so the life of the human psyche – the exchange of information.

Exchange of information in channels of management of the organization – this is the materialization of the organizational links between its organizers, on the one hand, and on the other – its relationship with the environment. This is should be considered in that sense, how it is analyzed in material production. In this regard, O. Bogdanov wrote: «The exchange of goods is an expression of institutional relations between people in society as a system of production and activity of individual psyche with its subjective assessments comes down to that to adapt the person with its



economy to the objective, independent from him conditions of social organization» [64, p. 136].

At the same time, one exchange cannot be equated with another. Between them there is a great difference. If the exchange of management information in social channels reaches a certain meaning and intensity that makes the social system holistic and capable of reproduction, then it acquires the quality of organizational metabolism. Metabolism (from Greek. *Metabole* – change, transformation) – 1) is the same as the metabolism, and 2) the set of all chemical and physical changes occurring in the body that contribute to its normal growth and development [233].

This means that the system is able to interact with the environment through the mechanism of intersystem exchange (organizational metabolism), which is represented by flows, exchange of living space areas, exchange of activities, exchange of resources, exchange of ideas, values and information.

Thus, information metabolism nourishes the process of formation of a new institutional order in the social sphere, which leads the social system or self autopoiesis being. To ensure its new status the social system forms the homeostat. By the way, a lot of interesting things about the self-organization and self-regulation can be found in the works academician of M. Amosov [11–12]. He even proposed a model of state, i.e. homeostat a kind of social system, he has calculated the limits of sustainability of social systems in three coordinates: power, property and economic level and submitted his scheme of self-organization in society [12, p. 148, 166–167, 184–187].

However, more interesting for us is a model of self-regulation of the social organism of countries proposed by Bekh V. [See. 47], since it is sufficient to solve the problems correlation between social control and self-regulation. At its core the team of scientists of NPU named after M. P. Dragomanov done over the past ten years several research works for the Ministry of Education and Science of Ukraine, prepared

and defended candidate [70, 197, 266, 393] and doctorate [358] dissertations printed, solid collective monographs [398].

This model of self-regulation of the social organism of the country is the most complex form of interaction between subjects or structures to each other [398, p. 254–255]. Under the general definition of «regulation» (the regulatory process) we understand the regulation of social processes. Thus, under the streamlining of the process meant an increase of nonequivalence of probabilities of possible parameter changes artificially created by man reality, that is a secondary process that is using the concept of entropy, often described as antientropic, or as a process of reducing entropy [See. 24, p. 207–208].

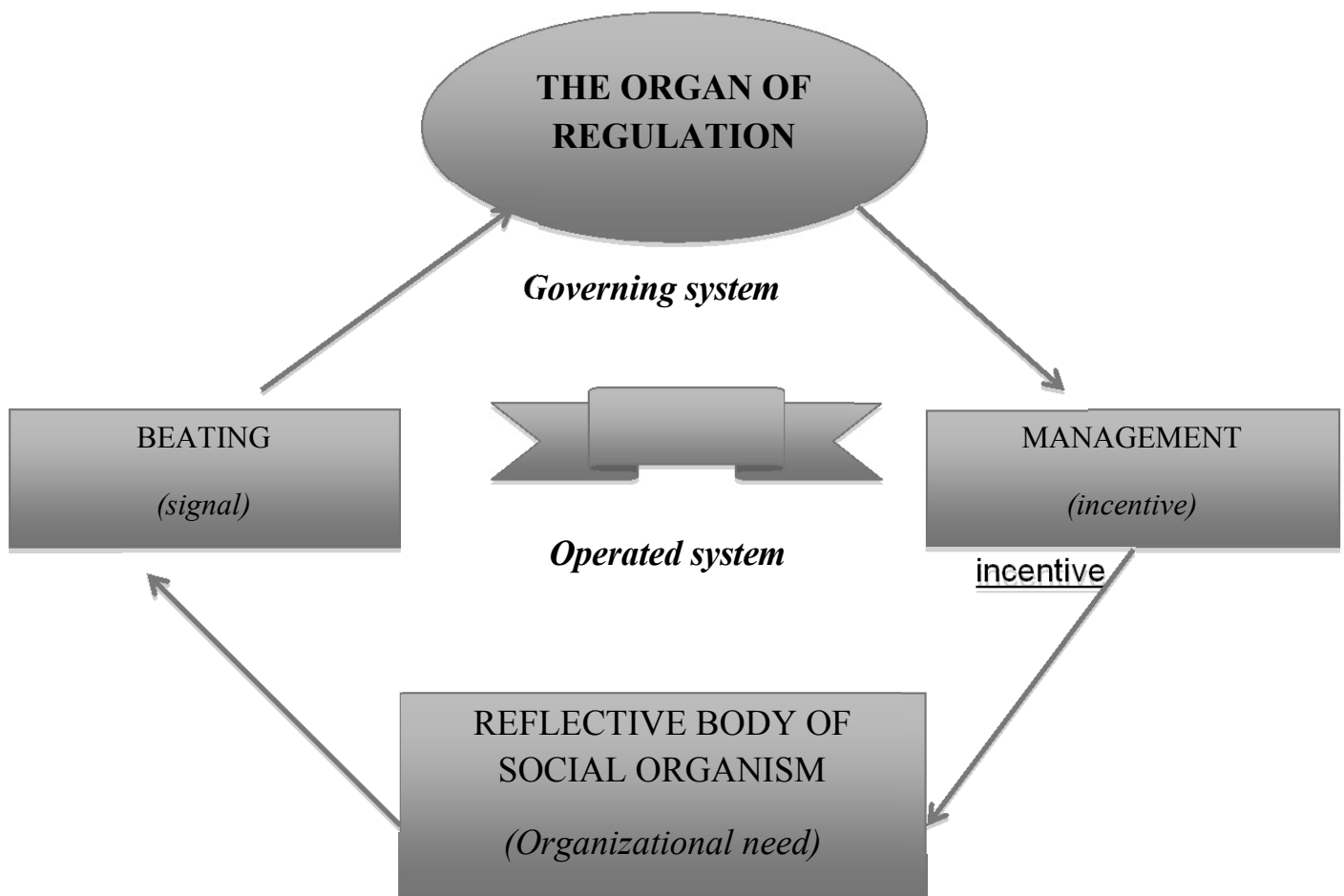


Figure. 5.3.1. Model of self-regulation of social organism of the country



The essence of regulation in general is reduced to the localization of social processes that are arranged relative to each other in space and time cycling. Also this should be added the assessment and reassessment of the value of social phenomena. In this case, the regulation is the process of forming relationships is not only between processes, but also between those things, the changes which these processes will apply. Because of this, when the objects are arranged, are in a state of motion, its regulation appears both as a process and a product of self-organization of mind also as a process of products of latter. In short, the process of organization is the unity of processes of activation and regulation. Under activating is meant the «excitement or enhancing, transfer to the active state, the transition from dormancy to move» (in a certain frame of reference) [See. 403, p. 23].

Managing change self-control when and where the preference is given to information signal [218, p. 92]. However, implementation of this condition could happen only with the structural transformation of information into action – according to the criteria not only attribute, but the concept of functional information. The main premise of this transition was probably the appearance of a simple functional integrated system (hypercycle), which reversed substantial performance – to the source of each structural actions – sets the practical relation of correspondence between reflected and reflectious structures.

Moreover, in the absence of sufficient compliance holistic system of self-regulation is simply not formed, and in serious violation of it – it is destroyed. This «is carrying» by natural selection. Only when real interactions under cyclic process does not stop after the first cycle, and lasts as long as the components of its «estimate» the structural matching that is installed in them as sufficient.

Thus, the ratio of correspondence between reflected structure and is reflectious in the material system palpable attitude that has, in the words of Marx, «the nature of the process» [271, p. 29].



Therefore, the organizational relations play the same qualitatively new role in a process of self-unfolding of self-motion of social organism that the mind or activity plays in a process of self-unfolding by a man of subjective image of the universe. On the surface of our lives stands management information, new processes of self-regulation and their products occur. But not only changes in the functions cause changes in the structure of the social system. Similar changes can cause dysfunction, which constitute a violation occurring in the system, which lead to the destruction of the system.

The essence of the social systems (society), in the opinion of Syetov that we also support, is revealed through five principles: the principle of combining functions, the principle of mainstreaming functions, the principle of concentration functions, features labilization principle, the principle of neutralization dysfunction [See: 403]. The degree of organization of society, therefore, depends on how fully actualized and concentrated are the functions of the system.

The mechanism of self-regulation of social development of a country is provided by the interaction of four specific mechanisms, namely: decision-laws, the laws of the mechanism of action, mechanism of law and social control mechanism, or feedback [See: 398, p. 254–379]. The researchers attempted to investigate the adaptation of the system of self-regulation of Ukraine to the system of self-regulation of United Europe [See: 398].

The mechanism of making laws is the channel through which the self regulatory process distinguishes the most important needs of the population and acquire the standard form – the form of laws and create their own range of functioning – standard and value management. This is the ontological characteristics of social control as a relatively independent type of organizational interaction.

The mechanism of action of the laws is provided, at least by two factors, namely: a) mutual embodied in its rules and logic of its construction, and b) its compatibility with other, previously adopted laws. Analysis of the mechanism of the law involves an analysis of

the law in three «dimensions»: 1) the effect of the law over time, 2) space, 3) the number of persons [410, p. 329].

Mechanism of laws is actually a social management in its highest form – the state. Separation from the mechanism for implementing the laws in an integrated system of self-regulation of the social organism of the country is an important step towards creating a comprehensive picture of the management component of this system, and, therefore, an important prerequisite for the development of a theoretical basis to optimize its functioning.

The mechanism of social control, or feedback, is the main hub of social management and self-regulation of the social whole. It is based on the power of civil society that interacts with the power of the state. Such an approach is natural because «the ultimate goal of civil society is to achieve a happy life, aided both public and personal relationships (members of civil society – ed.). Its ultimate goal is life and any life that we consider is a certain natural concept; it is covered and supported by association» [491, p. 137]. We can add the efforts of civil society and the state.

At the same time, let's pay attention to the fact that social control passes four classic stages that are inherent to any process: 1) the emergence or isolation of the phenomenon of social control of the general regulation self-motion of the social world, and 2) the formation of the structure of social management as a relatively independent subsystem of the system of self-regulation and 3) functioning of the system social management as an active and powerful subject of organizing of social relations, and 4) further development, the philosophical sense of removing or self-dissolution phenomenon of social management in a system of self-regulation of the social world.

However, in consideration of the foregoing, we cannot adopt in its entirety given above model of the system of country's social organism self-regulation, since it «works» only in one plane with coordinates «norm-value»; however, we have already proved above, that homeostat should also have another – semantic plane. This

means that homeostat of the social organism of the country is a cone, the base of which is a given model of the system of country's social organism self-regulation.

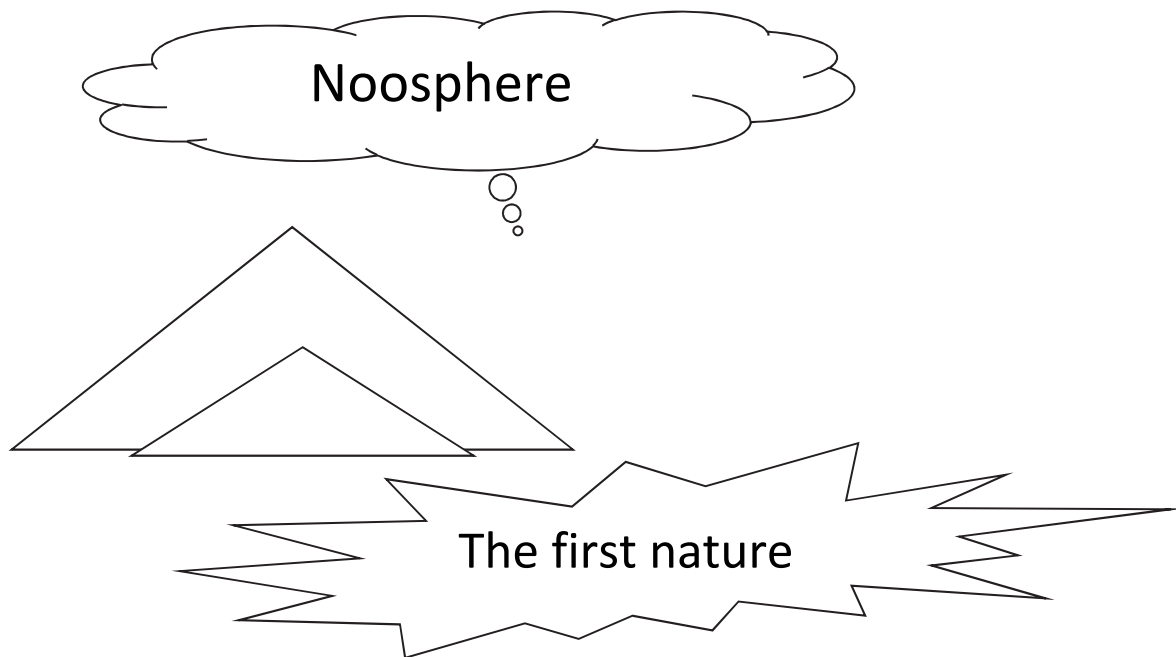


Figure. 5.3.2. Model of self-regulation of the social organism of the country in the vertical dimension

It is under these conditions we have the opportunity to enter its system of local self-government of regions, local communities and other social communities. You can also reproduce channels of information communication, by which the semantic field of the noosphere is being involved into self-regulation of the social whole.

In this case, normative – value field of state intersects with value-semantic field of society, and together they form the value-semantic field of the country. Normative base as a product of state and public morality remains a specific product, and value-semantic substrate takes properties of the universal purpose.

Thus, the difference between random, but rather a simple information exchange and organizational metabolism in the



organization lies not as much as in the process of exchange as in its products. Formally, the simple process of information exchange of organizational products in the metabolic process of moving the same semantic message and products and the consequences of the use of the organization of these products are different.

In the first case, the organization has an unstable structure, and in the second case, on the contrary, a constant or the developing one. So here we are dealing with homeoklasis, homeostasis and homeorhesis. To these three states of the system, that are provoked or provided by management system for any organization, we will return later and comment on their methodological connection with modern concepts of social management.

In a broad sense the category of *management* is often defined as a function of various organic systems of nature and complexity which, according to B. Gournay, «maintains their structure, support, and internal regime of functioning of the program. Management is a system of organs, institutions designed to make decisions of political power» [141, p. 489]. Social management differs from other controlled systems by the fact that, within it are operating not only spontaneous mechanisms, but also two interrelated determinants: the conscious and spontaneous ways of regulation.

Organizing exchange in the management of an organization or organizational metabolism is determined by two sources: culturological and innovation, and the functioning has the traditional / conservative or the innovative character.

According to two types of determination in the structure of management of the organization, two mechanisms are formed and are functioning: cultural (value) and innovative (semantic). Their action we can see on the example of the results of research work of V. Bekh and L. Semenenko [45]. We remind what A. Bogdanov meant by mechanism. He wrote that «mechanism» originally referred to the organizational system that systematically arranged by the people themselves, and all these systems, the structure of which



was able to understand and understand as much as is learned and understood the structure of these tech-established systems» [64, p. 137].

Culturological management mechanism V. Bekh and L. Semenenko revealed on the example of the social organism of the institution [45]. The possibility of such an independent existence of cultural formation we find in the writings of other classics of philosophical thought. «Values – wrote one of the greatest representatives of the Baden school H. Rickert – belong neither to objective area nor to the area of subjective, they form an independent» kingdom «that is on the other side of the object and the subject» [386, p. 33].

So, from thoughts of total employee within the space of any organization, it is formed a kind of semantic core which becomes an attractor of process of generating a local social world. As a result of this, spontaneously emerge local social fields (cells), which occupy, usually those parts of space, in which is concentrated one or another professional group of employees.

The innovative mechanism of management. Role of activity of the subject in generation of meanings emphasize V. Frankl, M. Chyksentmyhali, S. Maddi, J. Byudzhenal, J. Kelly, L. Thomas and S. Harri-Auhstayn, John Shotter. Determination of sociocultural meanings is noted by Jung, M. Chyksentmyhali, F. Phoenix, R. May, J. Smedslund, L. Thomas and S. Harri-Auhstayn, R. Harry; a special role of teaching and learning in the generation of meanings stress F. Fenix, L. Thomas and S. Harri-Auhstayn; J. Shotter and K. Levin also pay attention to the influence of other people on the generation of meaning (valence) in a form of command, prohibition or example.

The semantic determination takes into account the impact of the environment on the staff of the organization, and then by its effect it is reflected in the corporate decision-making. This means that its effect should be analyzed according to the general theory of governance as an external supplement (emphasized – ed.). The



principle of external additions and its application in decision making is shown in modern scientific literature [2].

On this case, we can complete the functional analysis of this phenomenon. Semantic sphere of the individual, which is assembled from a set of semantic determinants not only «raises man to the status of the individual, but it makes him the master of his body and behavior, independent subject in the cultural and historical process. «Personality ... not inborn, but resulting of cultural development, because «person» is a historical concept. It covers the unity of behavior that characterized by sign of mastery (emphasized – Vygotsky)», – wrote L. Vygotsky [100, p. 315].

Further it makes sense to consider the products of functioning of semantic sphere of personality and set them according to the specifics of social role of managers and subordinates in the organization of social space. Semantic sphere of personality consists of a number of semantic structures that form specific connections and have their own mechanism of operation [249, p. 167–251]. The leading institutions, according to D. Leontyev, are the personal meaning, semantic setting, motive or motivational mechanism, sense, semantic dispositions, semantic construct or attributive mechanism of sense, personal values and needs. This dynamic semantic system he regards as the principle and the unit of analysis of semantic sphere of an individual [249, p. 232].

Management philosophy, through structural and functional analysis of the management system, that takes us to an understanding of the three possible states of the morphology of organization, namely homeoklasis, homeostasis and homeorhesis, opens the possibility to classify the existing concepts of social management and even those that will be offered for practitioners according to their purpose. Methodological reception for classification is simple: available concepts of management are «imposed» upon the empirical state of social systems.

If it is found that: a) homeostasis requires stable influences for reproduction a dynamic balance and relaxing drift of system in a



rather quiet environment, b) homeorhesis requires the use of the internal energy of the system and therefore requires the organizational influence, releasing the potential of internal sources in the evolutionary movement of unstable market relations, and c) homeoklasis is in a state of entropy increase and therefore requires radical management actions in a limited time and space, then they, management concepts, have to lie on their shelves, as things in baggage room.

Analysis of total current concepts of social control allows in the former case to consider, at least five types: management models, situational management, management by objectives, the principle of self-learning, management through goal formation in the second – four concepts, namely soft management, innovation management, management and synergistic management, neuro-nmanagement, in the third – two theories: crisis management and risk management.

Based on this vision, we can even conclude that this step would lead to the emergence of a new scientific discipline that has a status of so-called special theories that are deployed in the structure of sociology. The results are summarized in a comparative table 5.3.1. **(See Appendix A).**

So, let us make the main conclusions of the functional analysis of system of social management. They are, in our view, as follows.

First, the functional analysis of management system highlighted subjective and objective ingredients as a whole in which relations have become differentiated and obtained ontological significance, that is become the bodies that affect the quality of management. It also showed the specific roles played by value and semantic determinants in the social body of the organization. It is determined that the component value determines not only the behavior of staff, but also creates corporate regulatory system that is at the heart of its governing body. Semantic component, in its turn, is based on the semantic core of personality structure that has a three-level incentive system of developing the sense, sense recognizing and sense building; it comes to the surface as the motive of activity of an



individual who pursues own interests and meets own needs. Under its pressure, the heads modernize the corporate ideology, and subordinates – protect themselves from wasting vitality. The mechanisms of action determination of the value include the chronotope and the traditions, and the semantic – closing of life relationships, induction of meaning, identity, insight, collision meanings of meaning.

Second, it turned out that organizational interaction has systemic character and goes through several stages of ontological maturation as a deeply internal process by which products of administrative activity are generated – most of which are management decisions.

Third, organizational exchange, with the direct and feedback interaction as the content, is based on empirical and policy information in acquiring a certain degree of maturity becomes as the organizational metabolism, marking the morphological perfection of the organization and its transition to full operation of the product of body of self-regulation – homeostasis. Communications of management can be regarded as one of the characteristic expressions of systemically important connections. The complexity of their analysis, among other things, is the fact that usually, at different levels of government, is more or less regular alternation of rigid determinate and «corpuscular» (i.e., probabilistic and statistical, if use more common terminology) methods of management.

Fourth, the control system shows value- semantic determination and thereby there are two types of regulatory mechanisms: cultural, that «works» of values substrate and depends on the ideology of the organization and its tradition, and the innovative that is the product of developing the sense of individuals involved in functioning of the system.

Fifth, the direct and feedback relations in the social management system leads the ontology of the organization to three common states: homeostasis, homeorhesis and homeoklasis that management philosophy proposes to use as a methodological



means for systematization of study of current concepts of management, through “tying” of theoretical products to regulation of social behavior of the system.

Sixth, the availability of management makes it necessary the formulation in the study of some systems (those who have in the possession their own «body» of management) the problem of the objective and reasonable nature of their behavior. This notion of objective is not interpreted in a traditional teleological but in modern sense provided by cybernetics. The source of transformation of a system or its functions is usually within the system; since it is related to appropriate behavior of the system, the most important feature of a number of system objects is that they are not just systems, but they are self-organizing systems.

Seventh, revealed a genetic link between semantic and value determination indicates that the semantic determination precedes the determination of values; moreover, established also morphological and functional differences between them; the technological relationship between semantic determination and decision-making process, the essence of which is that the semantic determination operates on the principle of external additions and therefore actually is present in the decision-making.

5.4. Development of a system of social system management within the paradigm of management philosophy

The objective of this section is to analyze the self-unfolding of the social system management perspectives from the viewpoint of philosophy of management, since we have travelled a long way across the problem field of this research, and have to introduce the way out of it into the plane of development.



Our concepts of the social control phase are given from the management philosophy standpoint and are based on M. Zgurovsky's idea about technological prognosis of the future described in the article «The Scenario Analysis as a Systematic Methodology of Prognosis» [179]. This idea is supported also by scientific and technical program «Technology Prognosis as Systemic Methodology of Innovative Development of Ukraine» [453], which was approved by the Cabinet of Ministers of Ukraine for a period of 2002–2006 under the prioritized direction for development of science and technology, «The Issues of Demographic Policy of Human Potential Development and Civil Society Formation».

Although we are clearly aware of the fact that prognosing the image of future management of social organizations, especially in the time of transition, is a tough and thankless task, yet necessary. Thus, to model the future in detail is a naive idea; only a general picture is possible, a set of trends of time and imperatives of future.

Recognition of global unrest as the major challenge of present time requires understanding of complex issues. Therefore in current conditions, to undertake a new challenge is important. It represents future that may not be interpreted as a normal continuation of the past, because this future obtains a fundamentally different form and structure. In [563] this problem was called «*prediction*» (foresight). The term was used by Haston Berher (Gaston Berger) in the well-known magazine «Two Worlds» during late 50th of the XX the century. Yet the approach to address similar independent problems was developed only in the early 90th of the XX the century.

Thus, there exists an interesting method for predicting future in modern cognitive practice, which is known to us as scenario analysis. This is a promising approach, although not sufficiently elaborated or developed. The essence of this shift, according to S. Krimsky, is that the objects of modern science have lost the nature of solid bodies in the macro-environment of a man and act (for example, as the quantum-mechanical objects) as the constellation of certain features.



Therefore, without fantasizing further, please, take a look at the development of social systems through the categories of management philosophy and system analysis. This means that we need to analyze their situation through the lens of the homeostasis, homeorhesis and homeoklasis as they tend to be in a «subject-to-subject» relationship; meaning that to separate them is fundamentally impossible.

The starting point here is the homeostasis system of social development that corresponds more to the phase of the system of constant functionality. It is in the state of management system when it is mature, and therefore can manage the interaction between people in the space of the organization based on principle of dynamic equilibrium. The size and nature of the organization here is of no significant importance. According to the organizational point of view, A. Bogdanov observed that the world is in constant change, and there is nothing permanent in it; everything change in nature through action and reaction. Due to the interaction of elements that are changing, the observer can distinguish some types of systems, differentiating their degree of organization.

Organized structure is determined in the technology relying on the basis of «the whole is greater than the sum of its parts»; in addition, the more the whole differs from the sum of its parts the more organized it is. In the unorganized complexes the whole is less than the sum of its parts. Finally, in neutral complexes the whole equals the sum of its parts [See.: 64, p. 9].

«Resolution» is reduced to a new combination of elements which «meets the needs of» the decider, the «purpose» and is accepted as «reasonable». The concepts of «matching» and «appropriateness» are quite organizational» [See.:64, p. 48].

At the same time, in a social whole all forming processes are completed, and all available morphological parts and characteristics act in the interest of the needs of a society. Remember, that according to our hypotheses, among the formation process the final and the conclusive one is organizational metabolism. Organo



cenosis has to be completed with the generation of homeostasis, as an organ of self-regulation of the whole.

Management philosophy has to answer the questions about the quality of object or material towards which future impact of social management should be directed. The answer is decisive – a smart living substance, that is not a person as a living creature, but on the personality of the person as the source and carrier. It encompasses following properties: 1) organizational (management) consciousness – mental realization management process, 2) management activity, which is a realization of the goals and objectives of social management, and 3) the consumer of the management activity products.

In such a way for the reason of genetic interdependence the development of management and of organization as a whole can occur under two scenarios: a) positive – that is what we have already mentioned above as homeorhesis and b) negative – that should be homeoklasis.

We begin with the analysis of homeorhesis because it coincides with the leading self-extending trend of the social world. As the number of organizations worldwide steadily increases, their structure becomes more complicated and virtualized. Furthermore, the world becomes more arranged, and management is transferred to the shoulders of powerful information and analysis networks, E-Governments.

Morphological structure of the social world is polymerized (from – Greek. Πολυμερής – consisting of many parts). It becomes more homogeneous that makes its space favorable to the formation of the world governing body – the so-called World Government. It is worth noting in this regard the fact that if humanity has entered the XX century with at least ten great country powers; by the beginning of World War II there was at least a third less; later – only two; and after the «Cold War» – just one. It is logical to assume that globalization will set the boundary line also to its historical time.



Pioneers in the problem formulation for global governance are regarded to be participants of the World Order Models Project under the leadership of S. Mendlovitsa and R. Falk [526, p. 242]. The later formulated the concept of «central guiding system» and after some time this approach was supported by S. Mendlovits, preferring however the term «humangovernance» or «geogovernance» According to the supporters of global governance (most of which today are trying to present it as the antithesis of the World Government), humanity must learn to manage their own affairs to avoid chaos and destruction – such immutable imperative of coming era» [85, p. 29].

However, the political analyst and author of American foreign policy strategy Z. Brzezinski in his famous work «The Choice: The World Dominion or Global Leadership» notes that «the common interests of the entire world community should not be confused with the world government. At this point of history the idea of world government is lacking the practical meaning. ...World government can stay starry-eyed dream or a nightmare, but over several generations it will not become a serious project yet» [56, p. 272–273].

As the state of present scientific discussions proves, the idea of «global governance without global government» has been greatly extended [526, p. 219]. The view is gaining more credibility around the international financial institutions as well.

U. Beck in his work «What is Globalization? » writes that «we have been living in a global society for a long time» [37, p. 25]. This is partly a result of spontaneous process, inherent the dynamics of globalization, partly a result of goal-oriented efforts, primarily the United States and the European Union to establish a coherent and a comprehensive system of international cooperation. «America has a unique opportunity to lead this process because its system of governance is powerful and democratic at the same time. To the extent that selfish hegemony inevitably generates resistance and democracy generate imitation,

elementary common sense dictates that America must answer this call», – notes Z. Brzezinski [56, c. 273].

Inverse relationship in international discourse today can be studied on the basis of how legitimate institutions of governance function, controlling relations between countries or groups of countries. We refer to them, as founded in 1949 by the UN and a number of institutions such as the Security Council and others, and the newly created virtual collective bodies such as the Group of Seven, which was transformed after the collapse of the USSR in the Big Eight, the World economic forum in Davos, the Antiterrorist coalition and others.

We can continue to gain facts and indicate the factors, supporting our working hypothesis about the formation of the organizational matrix for social world and for consolidation of management system. However, the management of philosophy returns us to assess the typical dynamic form of development: to homeorhesis.

To do this we have to work out details of following hypotheses: a) mode of homeorhesis is determined by universal laws of biology, and; b) the deep mechanism of transformation, and the human use of the principle of sustainable imbalances, towards which as a result of a spontaneous release of free energy a living system aims to; c) the product of this development is a purposeful development structure and to enrich the noosphere; and d) the development of control system providing mechanism of sensecreation and senseborn of a person.

The mode of homeorhesis of the social systems has never been the subject of the analysis of social philosophers. The imbalance has never been used to explain social phenomena, and therefore we have to analyze modern biological insights. At the same time, E. Bauer drew attention to the paradox of the development principle. In the course of our study it became apparent that broken social system is driving the evolution of the social world and of the living in general [31, p. 146].



It is impossible to understand homeorhesis as phenomenon without specifying the nature of life. Our ideas originate from three requirements for a living substance, which were formulated by the E. Bauer [31, p. 26–28]. According to him, the first requirement for living systems was the fact that living systems in the permanent environment should not be in equilibrium, but should have the difference in the potential that can be aligned without external assistance. In other words, they should be able to do the job. The second condition required that in the case of any action from the outside, i.e. in case of any environmental change, the system has to perform the job that would impact have impact on the state changes caused by this external action, and would change them to. The third requirement, says that the work of a living systems in any environmental is directed against balance, which would have come from this environment for this initial state of the system. It should be noted that the last requirement, like the other two, does not contradict with the laws of physics, including thermodynamics.

Positive feedback reflects on the surface of life in the area of work directed by the social management principle of sustainable imbalances. We based this conclusion on the principle of universal law of biology, which states that «all and only living systems are never been in the balance state and they execute through its free energy, constantly working against the balance, essential according to the laws of physics and chemistry under existing environmental conditions [31, p. 32]».

One reasonable question that arises is where does the social system (while it is in mode homeorhesis) obtain free energy and where is the energy utilized? The answer to the first part of the question is found in the works of Behan, especially in the book «Genesis of the Social Organism of the Country». This researcher writes: «A qualitative nodosity» of universe ... is defined, as we are now aware of, by the term «vital function», in this context the human body. Herewith this ingredient is «life» ... reflects the



interaction of material and spiritual, and «activity» reflects the production of free energy that can perform work on the formation of the social environment [44, p. 115].

Elsewhere he gives a philosophical definition of «intellectual», defining its essence «as a means of free energy that can do work outside the human body. In this case, the human body becomes an instrument of social world that is based on intelligent energy» [44, p. 120].

To maintain the imbalance, the excited state of the employable structural elements of living systems, they all have to be so interdependent that a living system can be considered as a multi-level coherent system.

The social body as a field or energy-informational life form, that has no physical body detached from the external environment, is subjected to synergetic laws and the common factors of psychological and sociogenesis [47, 80, 83, 205]. We briefly examine it below.

Psychogenesis of knowledge is not the result of a simple registration of observations. The process of learning is impossible without structure, exercised by the subject's activity [379]. There is no (in person) a priori or inborn cognitive structures; inherited intelligence is a function that generates the structure only through the organization of sequential actions carried out on objects. It follows that epistemology or theory of knowledge, according to the psychogenesis, is neither empirical nor «preformistic» and can only be based on «constructionism», i.e. on the long time development of new operations and structures.

From this perspective, there are three forms of balancing. The most simple and, consequently, the earliest – is balancing of assimilation and accommodation. The second form of equilibrium is established between the subsystems, since subsystems usually develop with different speeds, causing conflicts. The balance in this case involves some distinction between their parts and their general properties that are different. This results into compensatory regulation between statements and partial denials, as well as



between direct and inverse operations, or in addition, the use of mutuality. The third form of balancing relies on the preceding. It differs in its construction of a new general system, which necessitates the process of differentiation, requiring new subsystems compensatory integration into new whole.

In short, cognitive balance is a «bullish» meaning that balances without leading to a return of a prior form of balance. Instead it yields some better form, characterized by increased interdependence or by necessary implications. The biological equivalent of this process (see the work of H. von Forster «From the Noise to the Order») necessitates examining phenomenon of «phenocopy» [554, 565].

Sociogenesis is another component of self-extraction of the social structure. It serves as «terra-incognita» for theory of social control. The term of the social control is not even defined in modern dictionaries. However, in sociology and in social anthropology it is defined as the process of historical evolution. It provides basis for generation and formation of human society [429]. In social psychology sociogenesis serves as the origin for the development of consciousness, individuals, interpersonal relationships, that is determined by the peculiarities of socialization in different cultures and socio-economic formations [429]. There are other definitions of this phenomenon [430, 515].

With the accumulation of scientific knowledge according to the exponential curve, spontaneous growth of scientific information, creating information web of global scale, raising general and personal information culture and the transition to society evolution neglect the heads of state and of government social development of these factors can lead to semantic international community disaster.

Homeorhesis, as a positive process of development of the social system, is unable to keep the way endlessly to nowhere. Sooner or later it must end, producing a product. In our opinion, it defines the process of creating homeostasis – a body that belongs to a third nature. At this point the «rise» of the social structure is completed.



The new system is integrated, self-sufficient, and therefore transitions to a mode of the homeostatic life.

In the sphere of social world, i.e. in the secondary nature, homeorhesis is materialized, and according to some researchers establishes a social management institution. This is a fundamental point.

Our basic point is somewhat different. We believe that the social institution that serves this area of activity for international community is a social institution of law, and is formed according to their requirements and potential properties of the control system coming from the womb of self-regulation planetary life. We draw a line between social institutions and social organisms, or systems based on the presence of man in their structure. In the social institutions they do not exist (at that time), as they form the basis of social organisms.

Therefore, we present the views of researchers who advocate the idea of forming social institution of management. In regard to this O. Tikhonov suggests several reasons to address the problem of institutionalization of management [See: 455, p. 69–70]. Then he continues: «Grow, caress and cherish this super institute. It is not only the cause for political governance and broad sections of the population, but also is for the academic and teaching staff» [455, p. 70].

Famous Russian management methodologist A. Prygozhiy [368–369] made his vast contributions to understanding of the transition process from perspective of sociology of organizations and management. He interprets phrase «return to the back» as a return to previously used, but neglected methods of management and control. A. Prygozhiy names the specific mechanisms of the transition process to be understood as integral within the process regulators [368–369]. These ideas are important for solving the problems of institutionalization of management today.

In conclusive analysis of social systems in a mode of homeorhesis (that follows the step function is implemented



mechanisms of homeostasis and is subject to the principle of dynamic equilibrium) we should make one more remark. It rests on the principle of sustainable instability, and shows that the living system upon condition of changing environmental conditions will perform work that aims opposite to balance, awaited in the modified environment and unaltered condition system.

Thus, the social system in homeorhesis has to reproduce itself through accumulation of structural power, which it takes from the intellectual sources and do not expect a quiet life in this paradigm, because its expenses do not always have to be planned. In this state, the social system acts in a timely manner and is very sensitive to environmental changes (e.g., in politics, or economic conjuncture of the world market).

Homeoklasis is diametrically opposite to homeorhesis development of social management. B. Voytenko writes that «the system unable to solve the emerging conflicts can be called organizational finite, and the process of their growing destabilization is termed homeoklasis» [96, p. 137–138].

Homeoklasis as a stage of the development of social systems is constantly in the focus of philosophers, historians and cultural studies. This problem was addressed and described its attributes famous explorers, such as A.J. Toynbee in the famous book «A Study of History» [458], S. Guntington in his work «The Clash of Civilizations» (1993) [505] U. Beck [36], P. Byuckenen [81] J. Baudriyar [68], Shpengler in his work «The Sunset of Europe» (1918) [529].

To these randomly selected names should be easily added the names of the following works of historians, philosophers, cultural, political scientists and sociologists, «The Constitution of Society» by A. Giddens [125], «Modern Science about Society» by C. Fourie [502], «The System of Modern societies» [340] «On the Structure of Social Action» [341] «On Social Systems» [339] by T. Parsons, «Differentiation» [254] «Society as Social

System» [255], «Social Systems» [256] «Evolution» [257] by N. Luhmann, «The Open Society and Its Enemies» in 2 volumes by K. Popper [363–364], «The End of History and the Last Man» [501] and «The Great Disruption. Human Nature and the Reconstitution of Social Order» [500] by F. Fukuyama», «The End of the World as We Know it» [82] by I. Wallerstein, «The XX Century in Social-Science Theories of Society» [352] by N. Polyakova, «Worlds» [391] by A. Red, «The Incipient Stage of Demise in the World System of Socialism» [280] by V. Myedvyedyev, G. Gref «Social Progress and Regress» (1896) [135] and others.

With this analysis, few new working hypotheses come into picture: a) the mode of homeoklasis is based on the second law of thermodynamics and is associated with the law of increasing entropy, and b) the underlying mechanism of transformation is a violent manifestation of the principle of increasing entropy (P. Florensky), which is the reason of self-developing social world, and c) the product of this development is the destruction of the existing social system that clears way to the development of the matrix of social structures, d) positive and negative feedbacks in the system are in a state of permanent conflict or completely missing.

We can provide many examples of such social systems. Just to point out few: ethnic conflict in Canada regarding Quebec; Nagorny-Karabakh, divided into two parts Korea and Cyprus; the Basque movement in Spain; the conflict between Northern Ireland and Great Britain; the issue of Tibet in the course of strategic policy of communist China; the behavior of the Taliban on the border with Pakistan; claims of Japan to the Russian Federation regarding the ownership of the Far Eastern islands.

Recognition of global unrest as a major challenge of our time calls for understanding of complex issues. Leaving aside the «global unrest – means the start of ignoring the main reality of our time: massive global political awakening of humanity and understanding that unequally intolerable living conditions worsen» – rightly notes Z. Brzezinski [56, p. 272].



Homeoklasis genetically matures in the structure of the social system irrespective of the form in which it operates, in either homeostasis or homeorhesis. It has at least two phases of development: latent and open. The first forms mutations, and in the second system falls into crisis and chooses paths, i.e. bifurcates.

The study of mathematical model of homeostasis showed that it has its weak points and critical connections, affecting what may produce different types of pathologies: direct links break – paralysis feedback – shock, cross ties – collapse. In most cases the unilateral paralysis is compensating, and homeostasis continues to perform its functions.

To achieve the set above goals, we continue to study and propose the principle on which the degradation of the structure and the egress of the interaction of all organizational fields, even extremely powerful in past social systems. In our view, this principle of entropy increases its significance (P. Florenskiy). It is based on the second law of thermodynamics and is associated with the law of increasing entropy. Entropy is generated by all processes, and is associated with loss of ability to carry out the work. An increase in entropy forms a spontaneous process. If the amount of energy and social system is constant, then any change in the system increases the entropy (as chaos does, or as appropriate).

Upon the organization of the system, in other words its entropy, mainly two parameters are finding effect: 1) the intensity of the increasing number of elements, and 2) the intensity of use of the elements in the functioning of the system.

By selecting a feedback, such system can be translated into a state of stable equilibrium in which unemployment and inflation is maintained at least at a reasonable level, and to overcome them completely is almost impossible. The first step is associated with the choice of no-confidence vote that could bring the system out of balance and lead to death.

Today, with rapidly increasing demands for sustainability of social systems, which is reflected in the literature concern with the

study of so-called «sustainable or sustainable development» discourse in which homeostatic control reflecting with solving methodology selection algorithm taking into account the contradictions that directs development of the system. The idea of sustainable development was adopted in the lexicon of science after Rio-92, and twenty years later received a fresh look in June 2012 at the World Summit in Brazil (Rio +20).

We give an answer to our second question. Specifically, what sort of process takes place, and what kind of the main product we get, that we see outside of social reality. The answer is clear: the process of degradation, deformation, increase of dysfunctionality in the structure of the social system take place. The product is self-destruction or self-rejection from the arena of social development. In the final paragraph the old system is gone. It lost the ability to put a functional purpose and to mobilize means for its implementation. It can parasitize on authority, as does the institution of the Kingdom, for example, in the UK or of Denmark. Institute of monarchy on the African continent today, it seems, got in the difficult position of extreme instability and degradation.

So, in what way does the destruction of social systems happen? There are several scenarios for that process. Algorithm of rejection of social systems from the historical arena of life theoretically was derived, as known, by L. Gumilev through principle of passionarity, i.e. energy depletion ethnicity [302].

In a different way, the entropy in the structure of social system can develop in several cases: a) under the pressure of negative feedback, and under the pressure of positive feedback and b) as a result of fighting between positive and negative feedbacks in the case equal energy potential of both forces reached equilibrium that promotes stagnation and degradation, let us remember the Soviet Union and other closed societies, and c) in case of the absence of a feedback system also rolled to pathology, the crisis and the collapse of the organization.



Therefore, on the world stage in the sphere of management continually take place the fight of positive and negative tendencies. This is a contradiction in the sphere of functioning and development in the framework of social systems. If one of them wins, the development will go to that side. The authors continually submit proposals to the crisis management in the form of innovations. They touch upon the morphology as improvement of management systems (A. Prygozhyn) and functions, such as the development and selection strategies (I. Pranhvishvili) [369, p. 687–690, 367, p. 303–304].

The desire to rethink old attitudes, the willingness to adopt new ideas and approaches forms basis for the managerial optimism. «We realized – writes Ralph, Steyer and James A. Belasko – that the biggest obstacle standing on the way was the old paradigm of management (14 principles H. Fayol. – author’s note), which we had followed, and were forced to radically reconsider our role as managers, and learn to think in a new way» [435. p. 1–4].

So, how does the author sees new principles? There are three central principles: 1) to think strategically, that is always be aware of the outcome, and 2) to create an organization where people would know what ambitious objectives are ahead of them and would be willing to achieve them, and 3) to keep up with changes and to set timely goals, we must constantly improve knowledge, with faster pace than the reality [455, p. 39].

Searching of the new management paradigm is carried on in a very broad dimension: there is an active immersion in the history of management thought; the management changes associated with civilization and globalization, the spiritual revival of society and those with power and political stability, the problems of achieving economic efficiency and of social fairness [38, 185, 293]. However, regardless of the fertility of this work, in it still dominates the statement of problem of change of the paradigm of control over the research of self management in conditions of the processes of globalization and societal transformation taking place in the country and in the world.



Conclusions to the fifth chapter

Structural and functional analysis gives possibility to compare morphology control system with its functionality. There may be some situations. Two of them we refer to typical. The first of these concerns the fact that due to morphological immaturity of system, occurs functional mismatch of the governing body to the object management. The second situation is the fact that the exchange of organizational management has morphogenetic function and completes the structure of the control system. In the organizational structure completion metabolism has long been completed, however, can be changed by new types of production and, consequently, of management.

So we'll do the main conclusions of the above material. Firstly, the system of social control after the operation phase goes into development, which should be done in a positive algorithm, and in the negative. Morphogenesis of social control at this stage is completed, as formed homeostasis – third body in the horizon of nature that operates logical units or meanings.

Secondly, in the case of a positive alternative, the system evolves mode homeorhesis that develops on a sustained imbalance and, as a result, it enriches itself with the subsystem of feedback and changes to a self-regulation [4, 22, 191, 238, 398]. The paradox in this area is that homeorhesis does «carry» forward existing social system, but homeoklasis is the driving force that gives rise to qualitatively new forms of organization of social life.

Thirdly, if implemented adverse algorithm called homeoklasis, the system comes down from social arena. The principle of social life is the increase in entropy. Negative algorithm has two phases: latent and open. In the transition from the first to the second system bifurcate and elects a new horizon of development.

Fourth, our analysis showed that the government really is a social institution, as the phenomenon has all the necessary features



of institutionalization, and it took a number of steps, namely in the social body of the country quite naturally matured the need for joint organized response to restore order in relationship between the formation of the overall objectives of the emergence of social norms and rules in the course of spontaneous social interaction in four key areas of society: economic, social, political and ideological, the emergence of procedures relating to the norms and rules of decision-making, institutionalization of norms and rules, procedures, that their adoption and use, establishing a system of sanctions to support the rules and regulations differentiation of their use in some cases, a system of statuses and roles, covering any and all members of the social process.

This list of features is enough to recognize the power of the institution as a separate and independent, in social life serves a specific kind of people. Objectified product is a management system. Correlation is here as between a social institution of religion and the church, which is the social system. Other examples may be, in our opinion, the social institution of marriage and the social formation – the family, the institution of a system of national education and higher vocational education and others.

Fifth, emerging are contradictions that drive the social management to improve the structure and functions. Initially, the contradiction was the leading division of power, ownership and control. This question is not only the issue of culture, but also of the labour division, codification of rights and responsibilities among the various entities that are responsible for the survival of an independent society and constructing its prospects. Thus, we believe the government will inevitably give the management a dominant role in post-industrial type of social organization, as the principle of its formation itself may change. Therefore, the final stage of social cohesion can be maintained by new syncretism, syncretism of organization and self-organization, management and self government.

CHAPTER 6

FORMATION OF THE GENERAL THEORY OF TECHNICAL, BIOLOGICAL AND SOCIAL SYSTEMS: A COMPARATIVE ANALYSIS

The aim of this chapter is a comparative analysis of the elements of the research algorithm we have chosen. Comparison is the most important and common method of analysis, which determines the relationship and interdependence between events of management of technical, biological and social systems, their development, individual characteristics, to establish certain patterns, identify factors that affect the change in the analyzed indicators assess the dynamics and outcomes of management. Management is domestic in nature, because «to be – means not to be in a state of absolute rest but in the dynamics of continuous, small or large changes. The world as a whole and all its parts and elements has been undergoing constant change [33, p. 52].

Our working hypothesis is that the object of this study is under relative order; our theoretical and practical problem is bringing their interaction at the level of harmony. In this case – it is the art of management? It seems so, that it is designed to remind people that in addition to the chaos that is intimidating, and measured but sometimes heartless order, there is a higher world of beautiful harmonies.

6.1. World view and ideological confrontation in the field of management of technical, biological and social systems

The aim of this unit is to overcome the ideological laxity observed in practice and reproduced by us in previous sections of the study. Solving the problem of formation of a new ideology and world view at a critical stage of development of human society and the whole modern world is difficult because: a) many modern philosophers and political writers convince that pathology and crisis were all in historical times, but it will be worse, as the world approaches the «end of ideology», «end of history», «end of civilization», b) the first and, obviously, the main chains on the feet of «fugitives from totalitarianism» is the ideological shackles. Breaking of totalitarian society begins with the destruction of ideology (V. Andrushchenko).

Thus, in the previous chapters, we faced an ideological pluralism, which is formed in the area of technical (technocratism), biological (ecologization / eco-humanizm) and social (humanism) systems. We have seen that these three ideologies strongly interfere, and their reconciliation is a long-term affair, but very desirable for society.

«Organized society» should ensure civilized forms for this process. Ideological ruins are the most dangerous. As radioactive dirt, they must be taken to secure for the public places and forms. Therefore, abandoning the former ideological pretense, organized society «separates the seed from the chaff», utilizes «the ideological junk» and simultaneously preserves in man and in society all the best light and just, which undoubtedly was in this difficult era of modern social creation» [16, p. 246].

What is the essence of this mutual understanding, what is the «measure of the social communication»? [64, p. 185]. According to

A. Bogdanov, it is «common language and sum of concepts which are expressed in what is generally called «culture», or, more precisely, «ideology» [64, p. 186]. In fact, we need to create a leading ideologeme that influences and controls all three types of organization of human activity and directs their actions toward the search of the general theory of management of technical, biological and social systems.

Proceeding from this, we consider the existing contradictions in the triangle: technocratism – humanism – ecologizm. The degree of severity between them, in our estimation, is different. Contradictions between scientific -technocratic and spiritual and humanistic (anti-scientific) directions in contemporary philosophy, and human activity is more acute and obsolete at the time, while their opposition to the ideology of ecologizm is still being formed.

Technocratism categorically prevails over humanism and ecologizm. It acts as a modern form of dogmatic, mechanistic world view and activities. The conception of technocratic has twofold character. On one hand, it's hard (administrative – command) form of organization of production and the life of man. Berdyaev wrote that «the pursuit of integrity and the organic nature we inherited from the past natural-organic era. «Technical era closes the road to this aspiration. It «requires individuals to fabricate products, and, moreover, a large number with the least expenditure of energy. A person becomes an instrument of production. Deal becomes greater than man» [41, p.149].

In M. Haydeger's works technique subjugates all the space; her inherent logic pervades the minds of the era. «It is not just an attribute of industry but a way of self-realization of humanity. It is not just a tool but a universal value of the universal scale. Its status is equal the status of truth [57, p. 13]. Technology becomes a way of revealing, disclosing, and «discovering the mysteries» of deep properties of existence. Through it the man communicates with the being and hears the call of God. One has to understand the foundation of engineering, because the technique is not a tool in the



hands of man, but rather one becomes a means, slave at the mercy of the machine.

M. Marcel calls a modern, progressive man new technical organization «totalized universe of technical rationality» and «technical extrapolation». He believes the spirit of abstraction to be the core of modern civilization. M. Marcel sees a reassessment of the role of technology, part of the soul of modern civilization, where under the technique he understands the skill intended to conquer the world. The man felt himself the center of the universe and overestimated the power of his mind in the conquest of the world. Scientific and technical intelligence became the center of a new «technical civilization» that threatens by the complete dehumanization of the world.

This is one of the ironies of history where humanity becomes its opposite – anti-humanism. From the above said, it can be concluded that increasing role of technology in our industrial society has alienated man, turning into a technical element, detail of technical civilization. Once in its dimension, it is an application to scientific and technical reality, «man-mechanism» («Homo mechanicus») and «man-to-consumer» («Homo consumers») according to E. From). Analyzing modern Western civilization, M. Marcel thinks that technological civilization destroys spiritual meaning of value cultural and historical traditions. The «mystery of the spirit» has surrendered to the «spirit of technics » that captures the reality and can manipulate it. This process ends with a total manipulation of social life and human consciousness.

Global idea of technocracy as a concrete image of the organization was developed in the works of L. Memford. Since its appearance, technics was associated with all human nature. It was replaced by «mono-technics, entirely devoted to increasing power and wealth through systematic organization of daily activities» [138, p. 232]. This initial collective machine – hierarchical organization of society and labour, «human model all machines to come» – L. Memford calls Megamachine.



The same pattern is observed at the level of ideological confrontation technocracy, humanism and ecologism. In the field of education technocratism is a belief in the ability to bring everyone under the influence of ideological, engineering, mass and technocratic influence. «Technocrat – a teacher who suppresses any initiative; politician who creates recipes for all times and peoples, a belief in predictability inability to correlate the resulting benefits and paid price, it is – as an integral characteristic – anti-human relationship to man and the outcome of their activity» [443, p. 20].

The impossibility mechanical unity of human and natural science and scientific knowledge is being realized; as well as the corresponding images of the world. «... The fragments of reality, studied by natural sciences do not merge into a single image with the fragments of the world studying by social sciences ... the only one «cut» of knowledge serves only as ideal and can be considered a landmark of study on the methodology of science» [289, p. 278]. They do not merge, but interpenetrate and complement each other, if not to consider them in the same plane.

So technocratism «corrupted» like rust, and made deconstructive all combinations of the constituent elements of culture. Thus, out of a mixture of principles was born ideological eclecticism; a spirit of cultural entropy emerged; the spirit does not create eternal ideals and values any more, there is erosion of the pillars of eternal truth of existence, the foundation of culture; there is erosion of the eternal immutable spiritual ideals and values. Anti-technocratic is a synergistic approach. Integrity is no longer synonymous with tranquility and order. They serve a particular case, which does not define the general picture. This picture, however, determines the irregularity and chaos, coincidence. Unbalanced and spontaneous nature of scientific knowledge pronounced in the concept of V. Bibler. Holistic knowledge grows from continuous dialogue, reecho, the interaction of contents in both historical and in the modern environment. This approach leads to the necessity of returning to the bosom of science culture.



Thus, we can draw the following conclusions. In the present situation of ideological eclecticism, loss of sustained foundation of world perception, the collapse of the holistic picture of the world, to escape from another impasse of world history, it is necessary to break through the desire to move away from mechanical understanding of the unity and integrity to realization of their structure as a set of heterogeneous elements that complement each one; the refusal of a holistic understanding of knowledge as his balance, absolute regularity; the transition to the study of development, the dynamics of the whole, the idea of polyphonic knowledge; which strengthened anti-technocratic trends in the space of more general trend of optimal forms of integration, synthesis and integrity of scientific knowledge; paradoxicalization, dissociation of scientific picture of the world.

Transition of the global community from industrial to information age requires a radical change of outlook. If the conditions of industrial production was dominated by negative feedback and homeostasis has been common type of functioning of public relations, in a globalizing society key position is held by the positive feedback and homeorhesis is desirable state of structures of social purpose.

Therefore, in this study we proceed from a premise that the task of philosophy is not so much to create new knowledge, and not so much justify the learning process but create an attitude to knowledge, to learning, to the world – that is to shape the world view. After all, philosophy is of axiology–genesis character» [206, p. 851].

In the system of threats to the global community, ideological failures that affect society as a whole or its large parts take a special place. This is due to the fact that any community «gathered» and is reconstructed on a certain matrix. Important its cut is cognitive structure – a system of knowledge of reality, instruments of social consciousness and communication (language, important facts, theoretical concepts, methods, measures, logic, etc.).



Large heterogeneous community (such as people, nation, and society) is gathered at the complex ideological matrix with intertwined cognitive structures of many communities and subcultures. This matrix has the nuclear zone that brings together all the partial community. Emptiness is unacceptable, because thinking never stops. This is the only fully negentropic process known to us.

Due to the mechanism of thinking human personality in its structure gives rise to a specific hologram that integrally reproduces the Universe. Its existence has long been known in philosophy. It is a known Lao Tzu paradox «The great things in that which is small». From this standpoint the true is the claim that the man is a microcosm. «From a philosophical point of view is of considerable interest that adequate reproduction in the human brain of outside world is achieved by encoding sensory information according to the principle « a part replaces the whole».

It is this principle that underlies the symbolic representation of the world, due to this in human memory tremendous amount of information can be recorded. Optical holograms are now widely known, they can receive a complete three-dimensional image of the object. This image is significantly different from photograph because it is a located in space and makes it possible to inspect shown item from all sides.

The orientation to synergistic perception of the world is a semantic filter through which a person should explore the world. With the synergy comes a new philosophy: philosophy recognizes that study should be non-linear world, since the end time is almost always present in the solution.

With the approaching crisis, if it is in a mode of escalation, a specific model can be found; and build for it such range of structures that correspond to our present life and promote co-evolution. So immerse in synergetics, studying its laws and mechanisms, findings and conclusions should continue until a system of knowledge that allows navigating in a globalized and informationalized living space has emerged.



This is required by rapid technological innovation, particularly in the area of computer technology and communications that have made the social system innovation and fragile; while the world around us and the business environment - volatile and unpredictable. Faced with the new reality, the leaders and managers find that their basic theory and illustrious business-models become ineffective. The traditional hierarchical model and the model of «the movement» that allows to predict and control, to be replaced by a model of organic and non-linear thinking.

The Law of Requisite Variety is in the basis of the viability model of social systems in homeorhesis, which requires that a set of management responses was no less rich than the set of possible states. The more variety is, the more the various possible solutions are. And the diversity affects all characteristics of employees: gender, age, psychological characteristics, beliefs, attitudes and so on. Teams that lack of diversity are prone to develop standardized solutions, that is, subconsciously pulling the system from homeostasis.

As a natural reaction to the requirement of social systems to ensure their viability in the stream of becoming a global world in the field of organizational interaction, there were several qualitatively new approaches to social management. The most advanced of today, concepts such as soft control, synergistic management neuromanagement, risk management, and others. Thus, all new management paradigms are based on the following tenets that have become available only in the presence of a synergistic consciousness.

They are based on the understanding that living systems cannot acquire, collect as building blocks they need to grow. It all starts with the small. Small organism grows, forming itself; what it will become depends on the interactions within the system laid during a period of growth. Not only difficult, but impossible is to know in advance how to interact with each other myriad components of a complex system to operate in concert. The key to the creation of the



organization is to realize that it cannot be strictly controlled by a separate act of creation, but rather an evolution path to the desired result. These approaches are similar to gardening. The manager cannot know exactly how to grow a tree, but can provide the conditions for the desired product. Create the appropriate atmosphere, a system of rules, heuristics – the art of a manager.

Then proceed to a comparative analysis of the main characteristics of the philosophical management of technical, biological and social systems. To do this, we use a comparative table, which on the basis of the previous sections, we reduce the parameters of named three phenomena and briefly comment on them (See: **Appendix B**).

We draw attention to the fact that general management of technical, biological and social systems covers all levels of planetary existence, since its first component includes an inorganic layer of the universe, which is prevalent inert substance, the second – apply to the organic layer and covers the living matter, including human biological, the third – is operating at a second nature, and orders livelihoods reasonable living matter and its organizational structures, or social structures. During the cultural – historical process emerged and stably function three worlds: the world of technology, the world of living things – plants and animals and the social world in which the personality has materialized as an attribute of a biological man.

Let us pay attention to the backbone role of human personality, which itself refers to biological systems, but as the dominant entity with organizational features, sets the parameters of the existence and development directions for technical, biological and social systems. «If people are killing and eating animals – wrote Bogdanov – they disrupt other vital systems to organize their elements as part of their own body. If they destroy predators because they are disconcerting force, and eliminating them, thereby organize their living environment to their advantage. When societies, classes, groups face devastating, disorganizing one another, precisely because each such



group seeks to organize the world and humanity itself in its own way. This is a consequence of separate existence, isolation of organizing forces, due to the fact that their unity, their general, slim organization have not been achieved yet. This organizational forms of struggle» [64, p. 71].

Highly effective tools of human impact on the development of these three systems are its way of thinking, world view and ideology. Consider the dynamics of these ingredients ideologeme management process through the formation of a general theory of management of technical, biological and social systems.

Thinking of a man is the underlying processes. About its content and nature we can only judge from its products – the philosophy and ideology, as well as the activities of managers of various ranks. It is clear that in the field of technical systems it should be conservative, as the changes take place very slowly here, and only occasionally we have seen explosion of scientific and technological revolution. In the field of biological development, it reacts more quickly, but the reaction is based on the instinct of self-preservation, is impulsive and is actually unmanageable. But in the social sphere, it has an aggressive character and is aimed either at the destruction of the enemy, in the case of a person or a country, or to capture new space or enemy territory. For examples of the latter type of thinking you may not go far enough, it is sufficient to remember the war of the UK with Argentina for Funklend Islands, the dispute between Russia and Japan over four Kuril Islands, Ukraine and Romania about Island Zmiyinyi and others.

The consciousness of the universal leader in a similar situation should have a wide range of operation, forms a chain: technocratism – ecosaving – synergetics. In the structure of a particular person's identity must be universal, and not what is observed today in practice. The concern is that the industry leaders today have several hypertrophied outlook. Techies – technocratic, which is maintained by the logic of self-unfolding technocenoses, environmentalists – by phytoplankton trends – and ecological communities, and social



management – on the logic of social genesis, and thus they are constantly trying to destroy each other.

According to the logic of self-unfolding technological, biological and social spheres, they are trying to impose their ideology on each other, exclude the existence of other ideological approaches. «Where a person intervenes, nature does not cease to do their job. Fate of the complex, it tends to retain or remove, is determined, as before, by the sum total of the conditions, all the actions of the environment, and human effort is only one of the terms of this sum» – rightly Bogdanov wrote [64, p. 166]. The devastating effects of this – unbelievable as in the case of inharmonious control these three areas as destructive factors begin to work technosphere, the biosphere and sociosphere.

Causes of generation management in each case are specific. In the technical area – it is an attempt to satisfy the needs of man and master the environment, primarily in natural resources. In the field of biological evolution – is the need to adapt to the state of a biological organism of the environment with a view to self-preservation and development, and the need for human intervention adds implementation capacity cloning, artificial propagation and breeding. In sociosphere – it needs the individual, led to the division of labor, and human aggression in relation to the external environment in order to master them and enrichment, expansion of the area, living space, primarily due to the neighbors, and later – as a result of mastering the cosmos. The Moon has almost no free sites – all sold out on the Earth. The queue is now lined up at the stars.

The nature of managerial influence in each case is specific. In the management of technical systems the energy-information on the impact of facility management certainly prevails, in environmental systems – this is at the expense of information and real effects, since this tends to a biological organism that lives at the expense of metabolism in sociosphere – at the expense of information policy governing entities that today even led to the information wars between countries.



Since the government in general is based on the information that this kind of influence on people is the most «narrow» and the most powerful, even comprehensive. So it is no accident, the World Federation of Scientists, a kind of «human brain», in August 2000, the first in the list of threats to humanity in the XXI century put the threat of international information security (IIS), pushing into the background environment, energy, and other topics discussed constantly, and defeat of the USSR in the data opposing social systems and the events of 11 September 2001 in the United States is enshrined in the minds of European and world community. «In a moment the information space safety has become a universal problem», – says A. Sosnin [427, p. 7].

This we explain by the fact that: first, the words as semantic units are the keys – filters that make any ideology, and the latter is already filtering the information used by an individual, group and whole ethnic groups, and secondly, any culture is at the archetypal level values and patterns of behavior that directly follows the man grows as a normative system of values used by governments and thirdly, overbearing impact is through information and symbolic systems, or language, which is recorded in the text books, monographs and other educational materials; and fourthly, to manipulate the behavior of individuals and of the whole nation, for example, through advertising, political PR companies, advocacy, neuro-linguistic programming, pseudo, mechanisms fashion and other methods – it is usual for the present.

The essence of management of technical, biological and social systems in each case as its own, for example in the field of technological development is related to the maintenance of technical systems in a specified range of operation, which is achieved by maintaining a constant value of a parameter / parameters to adapt to an environment that is changing at the algorithm [73, p. 77]. In the field of biological development, it is vital to ensure plant and animal organisms, including the human body, taking into account the evolution of trends. In sociosphere – is instrumentally rational



activity management professionals and leaders on the basis of value-semantic substrates (values and meanings) in order to ensure sustainable development in the direction of the output planetary humanity in the space environment.

Content of management of technical, biological and social systems also varies depending on the scope of government. Most algorithmized it is in the technical field, allowing almost always switch to manual control, such as plane or boat. This is due to the fact that management is cooperating industrial processes, piece goods and products of material and spiritual production on a «subject-object» relationship, meaning that even without human intervention.

In recent years come to understand that the administration (management) including project management – is a special art that can identify and explore [See: 79]. Project Management methodology is completely different from a purely technical procedure, which is often associated with most projects.

In real life, there are many aspects of the project, which lie outside the technical area and want to arrange with the greatest possible care and attention. That is, to achieve the project objectives to the optimal use of resources and maximum satisfaction of project participants, including non-technical aspects of the project should be well managed, and it largely depends on the competence of project managers and project management teams, such as the landing of man on Mars.

In real life, the project team also needed only temporarily. However, the selection and coordination of its members should be given a lot of attention, ensuring an accurate understanding of their roles and responsibilities in the interim organizational environment. In this case, need human resources management.

Somewhat difficult to assess the content management of biological systems, as it happens in the biological organism and is a chain of humoral – nerve responses. Nervous system is an integrated morphological and functional set of different interconnected neural



structures, which together with the humoral system provides coherent regulation of all body systems and response to changing conditions of internal and external environment. The nervous system acts as an integrative, linking into single unit sensitivity, locomotor activity and the work of other regulatory systems (endocrine and immune).

It turns out that most of our knowledge about management is wrong. Here are Charles S. Jacobs' thoughts about this, the author of the original work «Neuro management» (2010). He writes: «New brain research proves that in the decision – making emotions can play a better service than logic. Positive as well as negative feedback does not increase the efficiency of employees and often make it worse. Measurable objectives are an important part of our strategic plans, forcing us to focus on short-term results at the expense of long-term. It turns out those management methods that we considered indisputable, not only ineffective, they cause far undesirable results.

However, new approaches that have proved effective, just do not fit in our mind and so seem irrational. Thus, the experiment proved that a little encouragement is stronger motivational force than large rewards, and competition is the best way to stimulate cooperation. The most productive leaders are those who have the least control [148, p. 3–4].

In sociosphere content of management decision-making, formalized, and it is available for repeat analysis and other subjects. The goal-rational organizational activity during the cultural-historical process, which aims at establishing organizational interaction between people and groups, including structural formations such as country, state, financial and industrial groups, some industrial firms, corporations, after all, an association of NGOs, individuals. Recently, the attention of researchers shifted to the sphere of decision-making in complex systems [See: 54, 413].

Forms management of technical, biological and social systems also differ. In the management of technology there are three,



namely: manual, automatic and automated, i.e. partial human intervention. In our opinion, they do not need specific comments.

Method of ecological systems managing is set forth in the environmental law [165]. Environmental rights and responsibilities of citizens of Ukraine – are the system of legally assigned to the citizens' powers and obligations in the environmental field [168]. The most complete environmental rights and obligations are enshrined in the law of Ukraine «On Environmental Protection» (Articles 9–12).

According to the law, a citizen of Ukraine has the right to: a safe and healthy environment; unite in public environmental formation; in due course receive complete and accurate environmental information as well. In the Art. 50 of the Constitution of Ukraine is written: «Everyone has the right to a safe and healthy environment and to compensation for violation of this right. Everyone is guaranteed the right of free access to information on the environment, the quality of food and consumer goods, as well as the right to disseminate».

Similar formulations due to the fact that this right are one of the main human rights. This right corresponds to the duty of the State to ensure the implementation of hygienic measures aimed at improving sanitation and environment.

Along with the rights of the Law of Ukraine «On Environmental Protection» provides to citizens and certain responsibilities. Thus, citizens must: preserve, protect and make rational use of natural resources, does not violate the rights of other environmental subjects, to compensate the damage caused to them and so on.

Environmental laws of Ukraine involving citizens in decision-making and local authorities should ensure citizens a safe environment. Often these duties exist only on paper, because there is no procedure to implement these standards into practice.

At present there are two main legal forms of governance in this field: Management of natural resources and the management system of protection. Direct management of environment by the Ministry of



Ecology and Natural Resources of Ukraine (Ukraine MENR) – specially authorized central body of executive power on Environment and Natural Resources [332].

If the form of environmental management and environmental protection remain largely unchanged, at different stages of social development changed the priority of a control method.

For instance, today the method of authorization is used more rarely while a usage the method permission increase; changing is the ratio of the administrative and economic methods, established new provisions for an appeal in court of directives, regulations of state agencies, local governments, non-governmental organizations.

It draws attention not only to methods of influencing public bodies, local self-government relationship with nature and the environment, but also to methods of citizens, civic associations' influence on government agencies to force them to conduct the necessary for the people environmental policies.

Management of environment and natural resources – is the activity not only to exercise the rights of government, but also the activities to fulfill their duties to ensure the environmental management and environmental protection. The body of law regulating the relationship of environmental management and protection of the environment is acting as a legal institution of environmental law.

In sociosphere are two forms of management of social development, namely: cultural, acting on the basis of tradition and ritual, and innovative, which operates on the principle of sensegeneration. The mechanism of their separate actions, as well as a mechanism value – sense integration we have reviewed in the fifth chapter.

The content and form of government of technical, biological and social systems have left their mark on the character of management. In the first case, it is conservative, since it has to ensure homeostasis technical system that is adjustable. In the second case, it is spontaneous, as implemented in the area of biological activity of the body and should ensure homeostasis system with elements of evolution that obeys three laws of Darwin. In the third case, he has to



have an innovative form as the next stage of social development is non-equilibrium in nature and is in the state of constant motion.

An important characteristic of the control system is a measure of the presence of the mind in the management process. In the management of technical systems the natural mind of man is involved, and now there is a tendency to involve in it an artificial intelligence, which is a consequence of living intelligence penetration into inert matter. Modern science came close to creating artificial intelligence, and only 0.8 percent separates the robot «Eugene» from the recognized full-scale and functionally relevant Turing's famous test requirements [432].

The famous British mathematician Alan Turing that laid the foundations of modern computer technology gave a special formula to determine the point where artificial intelligence reaches human level. According to its output if the machine can «cheat» inspection in response to 30% of the questions, it «has artificial intelligence».

This approach has been recognized by the world science reference, and all the latest «intelligent» computer programs have undergone this test. Until this summer, during the test one could easily identify with who they converse – a person or machine. Or, for example, a robot named Adam, designed by scientists of the University of Wales, without any external support has made an independent scientific discovery in modern pharmacology [514].

Thus, biological systems use natural intelligence. Social systems, in turn, use a collective intelligence-based natural mind of man. However, the hypothesis is that the person is able to use the intellectual potential of the noosphere and the Cosmic Mind, for example, through meditation technique.

Management philosophy explains course of causality types that operate in the area of general management theory of technical, biological and social systems. According to our observations, in the field of technical systems prevails the causal – mechanical causality in biota living – teleological; in social development – free. Every kind of causality we have discussed before, so we will not dwell on this.



Hence, we systematize a variety of features and characteristics of the management of technical, biological and social systems arising from philosophical analysis.

Finally, we can draw some conclusions from comparative analysis of management of technical, biological and social systems. First, to see interspecies differences in the systems of management of such systems, it is necessary to make some serious steps, namely change own outlook to see the inherent connection between these structures, and secondly, to recognize the need and theoretically ground the principal ideologeme in modern management of technical, biological and social systems – dynamic ideological balance, as pluralism in the present case leads to chaos and divergence of these areas of organizational activity, while harmony – still awaits us far ahead.

At the end of this section we note that from a philosophical point of view, the general theory of management of technical, biological and social systems is the ability to provide the arrangement of organizational interaction between all the participants of global life, from the field of technology to sociosphere, because they serve one another, that is supply each other with necessary functions for current life and future development.

6.2. Morphological differences of characteristics of management of technical, biological and social systems

The aim of this unit is a comparative analysis of morphological characteristics of management of technical, biological and social systems. For this, we presented in the table elements form the structure of the social organism of the country, acting dispositif – a



methodological tool integration management system of the above areas of human activity. (See Table 6.1.2). **Appendix B.**

We begin our analysis with the selection of subject and object of management of technical, biological and social systems as they are the main factors of any management system.

In the management of technical systems, a key subject is an operator, engineer, manager, control machines (ACS, CAM). They do this by using the device, body control subsystem. Their characteristics we have presented in the material given before. The complexity of such system is determined by two factors: 1) the size of the system or the total number of system parameters that characterize its state, and 2) the complexity of system structure, determined the total number of connections between its elements and their diversity [73, p. 76].

In the management of biological systems such role is performed by the team leader of the people of the community / collective. In the predators pack, animal herd or bird wedge – by the ringleader. The main body here is a reflective system of a biological organism. Complexity is determined by its structural levels of biological organism that has: cell, tissue, organ and organism level and the corresponding subsystem homeostasis or regulation, as we have noted above. Nervous and humoral regulation system of biological origin ordering full development of biological organism [74, p. 80].

In social systems – subjects of management is appointed heads of organizations, top managers, leaders of social movements and collective organizations or specialized education – for example, parliament, ministries, commissions. In the informal sector – klan, the mafia, shadow government offices. If management decisions are made collectively, then this is a disembodied entity – cybernetic system that is formed on the basis of semantic natural systems – Human - enriched artificial information network in the community. The complexity of the system depends on the level of human intelligence and achievements STR. For example, only in the early



twenty-first century, the question of E-Government raised; before the government decisions had been taken on an entirely different basis.

There are differences in the control layout. In technical systems, it is usually outside; in biological – within the biological organism, and social – it is combined, since there are two variants of taking control: a) managers alone – this means that the body of authority has a topology similar to biological organism and b) collectively – when decision-making body is outside the system.

Management levels also significantly different, for example, in the former case – object and network; in the second – cellular, organ, organismic, trans-organismic, system – population, biocenosis, in the third – personal, corporate, regional, sectoral, national, supranational, continental, intercontinental, transnational, planetary.

Objects of management also are different structures or processes in the case of functional systems, such as society. In the technical field objects are technical, technological, transportation, energy, management processes [74, p. 37]. The structure formed in this case is stable, as is established under certain environmental conditions and implementation of predefined functions. The latter makes object management limited, and a change of circumstances requires unit / governing body rearrangement of such system. The principles of morphological construction of such object are 3 fundamental principles: open-loop control, closed control (feedback), compensation for variations / perturbations [74, p. 372]. Channels of influence on the object are special communication channels of information communication.

In biological systems is a natural metabolism. Metabolism in biological structure is a chemical reaction occurring upon intake of nutrients until discharge into the environment of end products of the reactions [299]. It is a complex process of turning consumed food into vitality. Involved in the metabolism are all reactions occurring in living cells that result in the construction of structures of tissues



and cells. That metabolism can be regarded as a process of matter and energy exchange in the body.

Type of the structure that is being served by the management system – is stable, limited by biological laws and the laws of thermodynamics. The principles of morphological construction of such object are of inherent nature and function automatically.

The channels of influence on the object are special communication channels of information communication. Effects on the object are done through channels of functioning of natural metabolism.

In social systems actually the object of control is the social metabolism, acting as a fundamental mechanism of social, including specific – organizational interaction, mutual exchange by actors of socially significant values as part of conventional normative value system in order to meet personal needs [388, p. 52]. Social metabolism – a new term for the social sciences; so, will give some comments. In particular, the term «exchange» used in modern science is very active (recall the theory of exchange, communication theory, symbolic interactionism etc.) supplemented by the term «metabolism», which comes from medicine, where it is considered as the set of all the changes and transformations of substances and energy in the body [327]. The last ten or fifteen years, the term «moved» in the synergistic paradigm and spread in the social sciences as «social metabolism», which means the exchange of material and spiritual values among communities of people [288].

The study of language, which is a sign system, now has a large number of publications in the field of linguistics and modern communication, psycholinguistic and semiotic theories. Separately, these studies N. Krokmal' allocated a number of works devoted to the analysis of artificial languages. Among them, she calls such as «creators» of artificial languages (Descartes and Leibnitz, J. Schleicher, L. Zamengof et al.). The study of artificial international languages (Esperanto, etc.). Attempts to create classifications of sign systems which include also artificial



languages (e.g. C. Grynyev, A. Kravchenko, E. Kubryakova, A. Hrolenko, V. Bondaletov et al.) [232].

Today one of the most popular directions in the West is the philosophy of language, which explores language as a key to understanding the thinking and knowledge (work Hyntikki J., J. Searle, J. Darnet et al.) also communicative paradigm (K.-O. Apel, Gabermas, J. Boler B. Kulman, P. Ulrich, M. Riedel et al.).

In Ukrainian philosophical thought there are works devoted to the study of philosophy of language (recall the tutorial F. Batsevych «Philosophy of Language. The History of Linguo-philosophical Teaching» 2011) or N. Ashytok's monograph «The Language Picture of the World in Philosophical and Educational Aspects» (2011), and others). Language as a means of communication is the subject of research in communication theory (e.g., symbolic interactionism, the theory of S. Lem, A. Sokolov, V. Konetska, R. Pavilionis, L. Petrov et al.).

At the same time, language as a means of communication is analyzed in the context of theories of exchange: intercultural (eg., research Dvodnenko O. «Social Communication in the Context of Intercultural Exchange» (2004), information exchange (eg., thesis F. Rozanov «Social interaction as an information exchange» (2010), the information metabolism (psychological theory socionics, psycholinguistics, etc.).

Exchange, according to most scholars, also is a social metabolism, which is analyzed as intersystem exchange in the resource, economic, informational and cultural spheres (V. Vasyilkova) and is defined as the exchange of information, without studying or ignoring material- energy exchange – the base of metabolism in biology [287].

The type of structure served by the control system may be open or artificially closed. Their detailed description presented in the writings of Karl Popper [312, 361–362]. Society open and closed – a term first proposed by Henri Bergson and Karl Popper introduced

to describe the socio-political systems inherent in different societies at different stages of historical development.

Open society construed as a creative and dynamic society based on the ideas of liberal pluralism, flexible for various changes and impacts, filled with the spirit of individual initiative, rational understanding of the world, criticism and self-criticism. It is opposed to a closed society as affected by stagnation, authoritarianism, brought to magical forms of dogmatism and clear predominance of social principles of mass over the individual. This is the leitmotif counterpoint to the philosophical and historical theories of Karl Popper, in which the development of modern civilization, established by «Greek revolution» in the V-IVth century. BC. etc., proves the advantages and prospects of open societies (like ancient Athens or modern Western democracies) on closed (Sparta, tsarist Russia, Nazi Germany, the Soviet Union under Stalin).

Under the present conditions, when the «Marxist assault» as Popper notes in the afterword to the Russian edition of 1992 book «The Open Society and Its Enemies», collapsed, there were created the conditions for the global historical development towards an open society. The most important provisions of the preceding universalist program of this movement, he considers the following: 1) strengthen the freedom and sense of responsibility that derives from it, 2) world peace, and 3) the fight against poverty, and 4) the fight against population explosion, 5) teaching nonviolence. The concept of open and closed societies, as expressed in particular in the following provisions of the program of transition to an open society on a planetary scale is generally played a constructive role in positive cultural-historical and socio-political shifts in contemporary society. However, the potential of this concept remains largely unrealized, not only, or even unclaimed due to difficulties operationalization of nodes, highly abstract and essay shared concepts and an ideology-driven position of the author.



The principles of morphological construction of the facility determined person, and may be authoritarian, democratic or liberal model.

Channels of influence are social metabolism using artificial devices and technologies, such as mass media, television programming psycholinguistic human behavior and so on.

In the «New Philosophical Encyclopedia» by the Institute of Philosophy RAS these structures are given as follows [333]. Open society – is a concept used by a number of Western social and philosophical doctrines to describe democratic societies of antiquity and modernity. Usually contrasted with traditional societies and totalitarian are political regimes. There was in the 30th in the philosophy of Henri Bergson. In «The two sources of morality and religion» open society acted as a perfect analogue of public order, which is «dynamic» morality and religion, and consists of «moral heroes» humanistic oriented religious leaders, whose main purpose is not the problem, reproduction, storage type and etc., and the benefit of all mankind.

The most famous and spread this concept gained from the book by Karl Popper, «The Open Society and Its Enemies». The philosophy of Popper's open society is seen as the antipode of traditional inherently «closed tribal society. «It is endowed with traits characteristic of modern Western democracy, based on instrumental rationality, desecration of social and political norms and procedures, and the possibility of changing social status of its members. However, Popper finds examples of open society, not only in the present but also in the past. The first example of this type of society, in his view, is the time of Pericles Athens; where for the first time in the history of society were involved possibility of rational human thought, opposed to retardation of custom and sacralized tradition. The most important distinguishing feature of an open society in comparison with the closed one, according to Popper, is the possibility of rational reflection on the part of the individual about the challenges facing him, then as a member of a closed society is forced to act in accordance with the sanctioned and

/ or sacralized way or other requirements. Closed society characterized by belief in the existence of magic taboos and open society is a society in which people learn to critically relate to taboo and base their decisions on joint discussions and capacity of own mind. The availability of such rational-critical orientation enables the members of society appropriately and consciously directs the development of society and, guided by the «technology of gradual social change», form public institutions according to the real needs of citizens. According to Popper, this setting is typical of modern Western civilization, and is the best remedy for recurrence of authoritarianism and totalitarianism in the modern world. Conceptual developments of Popper had a significant influence on Western political philosophy (the interpretation of open society by George Soros) and the critique of totalitarianism in social and political thought of the West.

6.3. Functional diversity of approaches and methods of management of technical, biological and social systems

The purpose of this unit is to perform a comparative analysis of the functional characteristics of the management of technical, biological and social systems. Further we comment on the functional characteristics of this phenomenon.

The functions of the governing body determine the nature and content of the functioning technical, biological and social systems. Their manifestation depends on the source of origin. In the technical area are created artificially by man under a separate process or group of processes, such as autopilot. In biological – they are more numerous and more flexible, more capable of evolutionary updates



as activated natural biological organism and conditions of its habitat (life in captivity). In social systems they function, elaborated in the course of human cultural-historical process: classic, closed on managerial decision-making cycle.

In the course of evolution a significant modification of functions took place, and thus, were formed types of management of technical, biological and social systems.

At the early stage in the technical field one kind of control was used – stability, that is supporting the permanency of parameter that was regulated, and later appeared programmatic control systems that monitor the process, search engines, systems of extreme control, optimal control, self-adjusting systems [74, p. 37].

In the biological field almost nothing substantial arise in this horizon, apart from the appearance of indigo children and human-crystal. There naturally occurs the group (phylum) of people able to live in fundamentally new conditions of global and half-cosmic life. Despite widespread popularity, there is no scientific evidence of this phenomenon. However, philosophy has every reason to analyze this phenomenon – the appearance of new phylum of people, as to the phenomenon of «indigo children» a large number of books are devoted.

In the social sphere an evolutionary substitution of power kind governments for democratic ones takes place. The space of management implementation is also of a significant difference, because in the first case, it is limited to the technical parameters of the system (spacecraft, aircraft, automobile, nuclear power, Internet, cyborg, android); in the second – living things – plant and animal organisms and their areas of habitation; the third – social structure: the individual, family, tribe, family, community, company, region, industry, society and the country's organisms, the supra-organism systems –supra-national formations (UN, UNESCO, OSCE).

Each system has its own temporality or time dimension. For technical systems the product life is programmed and indicated in the passport of product. In biological systems, there is a huge time

difference. It can reach a thousand years or more, since some plant and animal organisms may lie in the frozen several centuries, and then come to life under the sun and water and become active.

Time dimension to social structures also varies depending on referred organizational level. For example, in a year ten thousand of industrial and financial short-lived companies are born and die. Kazuma Tateyisi, founder and head of the well known Japanese corporations «Omron», writes in his book «Eternal Spirit of Entrepreneurship»: «In Japan, for example, disappeared like bubbles, a lot of companies that could not adapt to the changes. Ironically, this process no one paid attention to. Unlike human, the enterprise that has terminated its activity leaves no memory about itself» [445, p. 59].

While the life expectancy of certain social organisms civilizations on average exceeds 1200 years. Nok Civilisation, named the discovery of the place of their first sculpture (African village Nok), originated in Nigeria, about 900 years before our era and mysteriously disappeared in the year 200 of our era [325]. Its social system was very progressive and was late Neolithic (Stone Age) and early Iron Age.

The life expectancy of social organisms of individual countries is several centuries. Marx, for example, considers society as an organism that is a series of periods (origin, evolution, death) or «natural interface» of similar biological phenomena that are developing themselves in the throes of labor, capable of transformation and as such, being in the process of constant transformation [See: 272]. And this idea of the social organism as the process was of great importance to address the rationalization of social practice.

The being of technical, biological and social systems has a common characteristic – is cyclical. In the first case, the cycle is given by the management objective, which is built by designer. In the second – the cyclicity is provided by attribute properties (pulse) biological organism and its organizational formations (bunch,



community) or man. The third – pulse is determined by the so-called cycle of management decisions and natural fluctuations in the evolution of phyla planetary mind.

In addition, the control system with relative autonomy in the structure of the whole has a number of functional characteristics. For example, the governing body of technical systems has consistency in the performance of functions and a limited range of adjustment that is laid by the designer.

The biological systems governing body has the following properties, such as irritability, anxiety, agitation, irritation, reflexivity and self-preservation. These properties are better analyzed within the structure of the human body, where they are the most mature and presented in the literature [356].

In the human body there are always a variety of environmental factors (light, sound, pressure, smell, temperature, etc.). Any factor that influences the body as a whole or its any part is called the irritant; the irritant effects on the body – irritation. To make the body survive in a constantly changing environment; it must have the ability to respond to the stimulus. The human body and every cell have their irritability – the ability to respond to the action of the stimulus by changing their livelihoods. For example, changes in metabolic acceleration or deceleration of cell division and so on. The nervous, muscular and glandular tissue excitability possesses the ability to respond to the action of the stimulus excitation. These are called excitable tissues.

For the occurrence of excitation important is: 1) the strength of the stimulus, and 2) the duration of the stimulus, and 3) the rate of increase in strength of the stimulus. If the rate of rise to the threshold stimulus strength was small then excitation does not occur. This is because during the growing the strength of the stimulus in tissue the changes are developing that increase the threshold of irritation and prevent the development of excitement. Fitness of excitable tissue to the stimulus, the strength of which grows slowly, is called accommodation.



Man is able to reflect after action exposure and provide an action axiological evaluation and perspective. So the algorithms of behavior in the environment are elaborated. Implementation of the act creates sharp reaction to it from the human environment and the environment in general. Although the act may be little noticed by the world, it causes a significant metamorphosis in the human psyche. He is the main component of metamorphosis. The expected reaction to the action and reaction does cause dramatic tension. It intensifies the motives of reflexivity, intensifying the very reflexivity. Last implemented through real work experiences its ideal essence, which is validated actional canon. It is the true intention. Canon, then, are certain requirements as to the nature of crime. Since no act cannot be the ultimate solution, the embodiment of the canon, action continues, it becomes permanent. It (intentionally) is aimed at a specific subject, looking for himself in this subject, but is not adequately finds himself as the trend continues to its implementation.

Attraction to the subject, further objectifying indicate only a limited actional implementation. It is in this act that real vision of the ideal and its implementation. Intension as the focus on the subject works is real driving force of the act. Implementation and unrealistic ideal intensify intention, namely motivational aspect works.

Action – how to exercise while imperfect ideal – lasts forever and becomes bright Schusuchtom (pulling) at an unspecified distance. Failure consistency between the ideal and the real work: not only intensifies the reflexivity of the act, but also gives rise to the idea of mental canon as a whole and act in particular. Given this, it is necessary to distinguish between the ideal and works actional canon. Ideal is a visual expression of uncompromising performance with real intentions of its implementation. Ideal killed when dealing with tangible, real world as drying Morning dew at sunrise.

In social systems in a disembodied social body manifest its properties. It is, above all, the ability to democratization,

humanization, deconcentration, decentralization, delegation of authority, ecological, intensification, etc.

Objects of management are able to respond to management influence. And each of them is doing it differently. Technical system returns to its original condition or is set by parameters such as vehicle speed set by the driver. Mechanical feedback (positive and negative, with the temperature increasing above the set, decreases the flow of heat; with its fall – increases) [73, p. 77]. How can you not give a classic example of Watt's regulator?

Biological systems in response to the impact of humans as the most advanced subject biosphere are changing their attribute properties or habitat. So there are representatives of a new phylum earth – children, indigo and crystal children. «Indigo children» [146] – pseudoscientific term was first introduced Nancy Ann Tepp, female psychic, to refer to children who, in her opinion, have an aura indigo. Its propagation time was in 1999 after the success of Lee Kerrolland his wife Jen Toubé's r book «The Indigo Children: The New Kids have Arrived». Kerroll argues that this issue has emerged as a consequence of communicating with the «angelic energy carrier» which he calls Krayon.

To children-indigo a variety of properties are ascribed: high intelligence, extraordinary sensitivity, telepathic abilities, and many other features. Despite the widely known phenomenon of today there are no clear criteria by which we can distinguish them from other children. Characteristics which are given by different authors can differ dramatically.

Indigo-children are independent; they are hard to be educated with the help of our normal methods. They do not recognize the authority. They are hard to be forced to do something against their will. It is difficult for them to study in regular schools. They are restless and deny many of the usual education.

It is believed that the first indigo children appeared in the 40th of last century, that they were considered hippies in the 60th and punks in the 70th of the twentieth century. Society rejected them, which is



quite natural and understandable. However, they did not need any approval or attention from the virtuous society.

We can say that children crystals – is the next form of indigo children. Children-crystals first were spoken about in late XX – early XXIst centuries. The researchers noted that their aura in the photographs taken by special devices is not round but crystalline form. All images of human aura had taken before were of a round shape.

Children-crystals differ from normal children even more than indigo children [472]. These children are independent; they have little interest to the games of normal children. Therefore, in the kindergartens and schools they face communication problems. You can also note late language development in these children.

Although in recent years a large number of children normally by age 2 are starting to talk. Psychologists explain this in a simple way: children-crystals understand everything anyway. They have no need for verbal communication, because they have pronounced telepathic abilities. They think that adults understand them, because they themselves can read minds.

Later, when they started to talk, kids-crystals have difficulties in communication. The difficulty lies in the fact that they are painfully aware of the nature of man. They are useless to cheat. If they see hypocrisy in relations on the part of adult, they shrink into one self. It is believed that children – crystals is the next stage of human evolution. Apparently, as it was also at the dawn of mankind, when Neanderthals and modern humans could coexist.

Children-crystals are very fond of nature. They do not need to inculcate a sense of the lessons of science. They are laid down by nature. According to them, they can understand the language of animals or even plants. Scientists conducted the following experiment. Having connected to the stem of wheat special equipment capable to capture electromagnetic waves, they poured over the plant root the boiling water; the equipment was recording a surge of waves. The plant was practically «screaming» in pain. It



seems that children's words about feelings of plants are not groundless.

Another ability of children-crystals is predicting the future. Without realizing it, they can easily foresee the near future.

Organisms of animals also change and adapt to their living conditions. They are able to make momentary decisions for the purpose of the vitality costs saving. In the Universe there is a fundamental principle: of the possible scenarios takes place the one that requires a minimum of energy for its realization. For example, the stone tends to fall vertically, and the river flows through the lowest areas.

An interesting example can be given from the life of a traditional natural pair «predator – prey». Natural selection forces the predators to develop new devices to catch prey better. The latter tries to produce new ways of escaping from predators. Predators and victims involved in an endless «arms race» that unfolds in evolutionary time. The result of this race is a steady increase in the volume of economic resources spent by both parties at the expense of other «branches».

Hunters and preys are constantly improving equipment to overtake (outwit, catch by surprise) the other side. Note, however, that the new device will not necessarily give the opportunity to overtake (or escape) simply because the antagonist is meanwhile also improving. Such are the properties of any arms race. We can only agree with the Queen from «Alice in Wonderland»: « It takes all the running you can do, to keep in the same place ».

In social systems the reaction of the subject to administrative pressure from above is of unfolding character and can last long enough, for instance, the delivery of enslaved people or occupied by enemy territory. The most effective here are such properties of the social body as the creation of new social structures, self-organization of emerging structures and re-organization of already existing ones, formation of environment or the exploration of new environment as astronautics does now.



An important aspect of comparative analysis is to evaluate the principles of management that is the mechanism of the use of management potential laid in the technical, biological and social systems. The principles of management are the result of generalization by people objectively existing laws and regularities inherent general features, characteristic facts and features that become common principle of their activity. Consequently, the principles of management are management ideas, initial assumptions that reflect the laws of development of management relationships.

Applying of the principles requires, as we know, the cost of relevant information and energy resources. When it occurs in the course of influence of one social object on another, it is fulfilled at the expenses of resources of the object that started affected fist. Its total costs are generally used for changing the other object in three ways: 1) change its substrate (substance-ontological) structure, 2) the composition and intensity of its processes (energy state), and 3) changes its ordering processes and elements (condition of its structures) [218, p. 88]. Costs of substance and energy (substrate – process) and the structural changes of the object of control takes place in any process. However, the proportion of these costs – the ratio of their values – can be significantly different. Therefore, here the law of energy saving functions in its fullness. Thus, the subject of control with the help of management principles performs specific activity that makes the object viable, and the whole system – capable of providing service to other systems within the structure of dispositif – a social body firm, country or the planet.

Principles of technical systems management are outlined in the theory of automatic control and automatic control systems [72, p. 141–144]. They were laid down during construction of the governing body. The construction of apparatus of control and automatic systems is based on a set of common principles of regulation, the main of which are the following [372]:

- Deviation-regulation principle;

- Disturbance-regulation principle;
- Combined -regulation principle;
- The principle of adaptation.

The principle of automatic control (guidance) determines how and based on what information to form the control action on the system. One of the main features that characterize the principle of regulation is business information necessary to generate the control action. Choice of the principle of the automatic system building depends on its purpose, character of the changes of given and perturbing effects, ability to obtain necessary business information, the stability of the controlled object parameters and elements of the control device etc.

Principles of biological systems. First of all, we need to identify the biological system, that is to say, flora and fauna. As a result of evolution they formed a kind of self-management mechanism based on instincts and reflexes. It is based on the perception by the system of environmental effects, such signal processing and responding to external stimuli. In fact, it is more accurate to speak of self-regulation – special property of these systems, which ensures their functioning. Biological control is directed to the use of objective laws of nature, which reveals themselves to biological sciences to create new plant varieties and animal breeds. In the Universe there is a fundamental principle: of the possible scenarios takes place the one that requires a minimum of energy for its realization. For example, the stone tends to fall vertically, and the river flows through the lowest areas.

The biological body automatically operates with the least expenditure of energy.

Principles of social systems are, oddly enough, uncertain. This is testified by the fact that in scientific literature they are not formalized and communicated as required and sufficient. For example, the textbook V. Knorringa «Art of Control» (1997) lists 13 principles [213]. The certified textbook of I. Herchykova «Management» refers to three basic principles: a) the optimal

combination of centralization and decentralization, and b) a combination of rights, duties and responsibilities, c) democratic governance [124, p. 144–145].

Modern authors number dozens of universal principles. Thus, according to one of the authors, social control has 20 basic principles [373]. In addition, there are four additional types [373]: 1) general methodological principles of social processes (14), 2) specific methodological principles (5), 3) organizational principles of social control (14), 4) private management principles (5). Among private guidelines and principles can be «informal» management based on customs, traditions, and informal relationships. It could be all sorts of moral and labor codes, codes of honor, rules of conduct of employees, requirements for executives, economic, social, political, legal, personal, and other settings such as: «In our department, usually all come in good time», «taking up for work, check for static electricity», «Do not rebuke a subordinate in the presence of a third party», «Give tasks to subordinate only in a written form», «Take away the documents from the table before leaving» and so on.

We think this approach to defining of management principles is unacceptable. This is another argument for the need to develop a general theory of management, as management principles are to define not the surface but deep laws and regularities in management. This discrepancy in their view requires first restoring order in any given sphere of control, and then accumulated material should be generalized and adapted to a higher level of management.

Almost the same inconsistency is found in the methods of management of technical, biological and social systems. Methods of management are a set of methods and techniques to influence group of employees or individual performers to achieve set goals. With their help, the governing body affects the individual employees and the company as a whole. Value management determines the direction of achieving the objectives in the shortest period of time under conditions of efficient use of all resources.



According to the content, management techniques are identified with the basic functions of management: planning, organizing, motivation, control and regulation. Accordingly, the following main groups of management are as follows: economic, organizational and administrative (administrative), psycho-social, legal, political, ideological and technological. Between them there is a close relationship and interdependence. Each method has elements of rewards and punishments.

In the field of technical systems authors analyzing management techniques indicate mathematical modeling and programming, operations research, and so on.

In environmental management we deal with the set of tools and methods of influence on members of social relations in order to ensure legal requirements for environmental protection and ecological networks, natural resource management and environmental safety [165].

In the complex field of environmental law, its method is not such «own», as the methods of classical homogeneous areas of law – administrative, criminal and civil. Environmental law borrows the methods of regulation in these areas of law using them for their own needs. This also applies to other complex areas of law – commercial, agricultural and so on.

In this case, classical methods of industry are supposedly «double registration» – in uniform and complex areas of law. However, as noted by S. Alekseyev and V. Yakovlyev, adapting the sectoral elements to their complex applications, complex industry does not distort these items and does not deprive them of their sectoral nature and independence.

The most widely used in the environmental regulation is the imperative administrative - legal method. This is found in the permissions and prohibitions setting, regulation, certification, licensing and environmental assessment, the application of administrative responsibility for environmental offenses and etc.



With penal method, the environmental crime is combating, and by civil law – disputes about penalty for environmental damage are resolved.

These methods are «joined» in environmental law on the basis of their environmental modulation. A typical manifestation of this is the norm environmental legal perspective, highlighted in a special chapter in the Code of Ukraine on Administrative Offences («Administrative violations in the field of environmental protection, natural resources, protection of monuments of history and culture») and the section in the Criminal Code of Ukraine («Crimes against the environment»).

As for civil (financial) responsibility, there is only the taxes method for calculation of environmental damages inherent in environmental field. There are specifics in the application of the civil law method as renewal of the natural objects of unlawful actions.

Ecological imperative united indicated sectoral means of influence into the complex method of legal regulation. The same imperative is based on the general method of greening in all spheres of public life. The legal component of this method is embodied in a combination of methods of environmental law.

In social management – «own» methods of influence on social processes. In the academic literature there are no basic research methods of social systems. Typically, the authors suggest that it is a set of methods and techniques to influence collective and individual employees in order to fulfill the mission and goals of the organization. They list several methods that are classical for social control: economic, social, administrative, political, legal, social, psychological, ideological, and others.

In available literature, in addition to these methods, we can find other types, namely methods of public administration [451], methods of regional management, business management techniques, methods, personnel management, financial risk management techniques, methods of investment management, management costs,



management practices at the company, management and other receivables. They are implemented in the form of [186, p. 343]: orders, decrees, orders, instructions, commands, advice.

The level of control is determined in the technical system – the upper limit defines the power of computers or the relevant network and the lower limit – determine the sensor with the appropriate sensitivity range. In biological systems – the state of the organism of plants, animals and humans. In social systems, such restrictions do not exist.

The mode of action of the governing body of technical systems defines a given control algorithm considering the dynamic properties of the system, physical and technical limitations in biological – biological instincts of the body, and social – policy or institutions and technology management work, desires and ideals of man [53–54].

The forms of behavior of the governing body of technical systems are stable as it is defined by constructor, in social systems – unmotivated, reflective or teleological, indicating that it may be aggressive or peaceful, in social systems – motivated or instrumentally rational. Style conduct of social control, there may be, therefore, liberal, authoritarian, democratic, conservative, totalitarian, groundbreaking or innovative.

Instrument in each separate case is : in technical systems – an informational and analytical devices, in biology – body temperature, food, pulse, respiration, blood circulation, oxidation-reduction reaction; in social – archetypes, meanings, ideas, values, norms [73, c. 80].

Forms of power usage in management are also different. In the technical area – this is the information influence due to structural information, in the biological field – this is a material influence with elements of violent and semantic influence, in the social sector – it is of combined character: physical violence integrates semantic influence, iron hand in the velvet glove (with a carrot instead of a stick).



Criteria of efficiency of technical, biological and social systems also differ. In the technical field – a morphological integrity and stability of operation, which is subjected to homeostasis. In the biological field – the biological organism sustainability, which is more suitable for the homeostasis with homeorhesis. In the social sphere – it is human well-being, freedom and creativity of the subject of cultural and historical process. The difference is in the selection of quality indicators of management of technical, biological and social systems – respectively: quantitative, qualitative and mixed.

Finally, we theoretically proved that the management has to «leave» and «return» in the main system of self-regulation process. Based on the above, the following conclusions can be made: in the field of technical systems, a person purposefully designs automated systems that actually are self-regulating structures. They do so on the basis of reliability, minimum energy and material expenditure, financial costs of formation and maintenance.

In the field of biological systems, it is based on the functional unity of centralized and autonomous management, which is held in a biological organism [73, p. 79].

In the field of social systems, it is based on the division of labor in the organization by separating autonomous and centralized (the capital city region); individual and collective social life control centers using computer networks.

Furthermore, we will compare the mechanisms of self-regulation, involved in management of technical, biological and social systems. In the first case – it is founded in the program of management on the principle of tracking the state of governed object.

In the second case – it is realized by autonomous mechanisms of biological organisms (cellular, molecular, tissue, individual body) until the deviations appear that require the participation of central control mechanisms [73, p. 79].



In the third case – it is realized by the struggle of contradictions inherent in the social world and the universe as a whole.

The range of regulation in the first case is set artificially by the creator; in the second case – it is unconscious; and in the third case – it is unconscious-conscious – superconscious and transconscious.

Therefore, we have consistently analyzed the functioning of the systems of management of technical, biological and social systems and obtained resulting material of comparative analysis is given in a separate table (See: **Appendix D**).

6.4. The contradictions and tendencies of the present stage of theoretical design of a general theory of management of technical, biological and social systems

The aim of this unit is a comparative analysis of the theoretical design management practices of technical, biological and social systems.

The desire of management practitioners and theorists are so powerful that, despite the absence of a detailed outlook ideological and methodological justification tools, perhaps, with exception of technical systems where mathematical thought is working hard in this direction, in the literature relevant theories can be found. Thus, in the field of technical systems, is spread the automatic control theory (TAU) as «a set of actions aimed at maintaining or improving the functioning of a managed object without direct human involvement according to a determined management objective» [72, p. 141]. If mars-rovers automatically land on Mars, and moon-rovers – on Moon and successfully perform research work: transfer photos and raw data processed

results to Earth, there are all reasons to believe these theoretical developments successful.

In the field of biological and ecological systems' management there are, accordingly, «The theory of biological systems' management» and «Environmental management» [166–167], and it should be recognized that these theoretical developments still too raw to centre hopes in them.

In the field of social systems management, in the literature there are also many claims for «The theory of management » [245] «The theory of social control» [533] «Common theory of social management» [496–497] and «Management theory of social processes» [380]. Our conclusion in this regard is as follows: the main theoretical work is still far ahead [144, 409] (See: Table 6.1.4).

Appendix D.

Any theory, including management, should be considered complete only when the laws are formulated, or at least the patterns of the areas of its service are marked. In general, the theory of management, the concept of regularity is usually viewed as the initial stage of formulation of the law at the beginning of its theoretical research. It should be stressed that this part of the overall management theory seems the least studied.

Without special theoretical explanations, in textbooks began to appear laws of ecology and social management. Here are some examples. First, let's analyze the sphere of environmental activities. One of the first statements that relates to the field of social ecology belongs to French researcher-evolutionists Jean-Baptist Lamarck (1744–1829). He along with the discovering of a number of patterns of influence of the environment on organisms first drew serious attention to the specific role of man and his possible disastrous consequences. He wrote: «It is possible, perhaps say that a person seems to be destined to destroy his race, in a head of time to make the globe uninhabitable». This statement echoes the «prophecies» of Leonardo da Vinci (1452–1519), who predicted the appearance of things, the results of whose activity... would leave nothing either

on earth or under the water that would not be subjected to persecution and eradication» [97].

The prominent American ecologist B. Commoner made a successful attempt to summarize systematic ecology as a science as four laws [97]. These laws are basically not new, but were first formulated in a simple form of images. Their adherence is a prerequisite of any environment due to human activities in the nature. Commoner's first law reflects essentially the overall communication processes and phenomena in nature and is: «Everything is connected to everything else». The second law is based on the conservation of matter and energy: «Everything must go somewhere». The third law focuses on actions that are consistent with natural processes, cooperation with nature, or co-adaptive (Latin co – with, together; adaptation – adaptation), instead of conquering human nature, its subordination to its aims: «Nature knows best». The essence of the fourth law is targeting people that any action in the nature does not remain unnoticed. This law sounds like this: «There is no such thing as a free lunch».

Diversity is considered a basic condition for the stability of any ecosystem and the biosphere as a whole. This property is so universal that is formulated into law (by W. Ashby) [97, p. 24].

According to renowned ecologist D. Chiras, nature develops and operates on four basic principles: recycling or repeated reuse of essential substances, permanent recovery resources, conservative consumption when the living creatures consume only what and in such quantities as they need, population control – nature does not allow the explosive growth of population, adjusting the number of individuals of a species creating the right conditions for its existence and reproduction [178].

Ecology – a young science, and perhaps because of this it has not formulated its laws with mathematical or physical accuracy. Perhaps this will be done later. In the meantime, it is assumed that environmental laws – is the average expression of certain cause-related phenomena [178]. Observations are numbered among the

laws although they that do not qualify for the laws; however, they can serve as the base for the laws to crystallize out. Here are some examples. These are: 1. Commoner's laws; 2. Law of minimum; 3. Law of tolerance of Shelford; 5. Laws of Vernadsky 6. Laws of ecosystems; 7. Thermodynamic laws in ecology and others.

M. Reimers worked especially productively in this direction, he is the author of book «Ecology (Theory, Laws, Rules, Principles and Hypothesis)» [385]. The author points to a number of laws for the individual segments ecology and activities, such as the laws of biological systems (17 positions) [385, p. 59], the general laws of the system «organism-environment» (9 positions) [385, p. 66], private laws in the «organism-environment» (11 positions) [385, p. 68], population-laws (20 positions) [385, p. 71], the laws of distribution of species in habitats (13 positions) [385, p. 83], the laws of populations' changing within the habitats (9 positions) [385, p. 88]; distribution patterns of communities (11 positions) [385, p. 90] biocoenotic connections and controls (13 positions) [385, p. 101], the laws of social ecology (5 positions) [385, p. 134] and others.

There is the same picture in the management of social systems. Science is not singled out the core laws and laws that explain management activities in this area. Here are some examples of different level laws and regularities, which today can be found in the literature. Among general management laws are numbered [411]: 1) the law of management specialization, and 2) the law of management integration, and 3) the law of necessary and sufficient centralization of management, and 4) the law of democratic management, and 5) the law of time management.

The laws of social management are presented in the book «Management» (2007) by L. Skibitska, A. Skibitskiy [411]. To management laws the authors of this source include: the law of required diversity, the law of management specialization, the law of management integration, the law of priority of social goals, the law of increasing subjectivity and intelligence in management.



So we need a more thorough study of the laws of social development and management of complex systems, and social and biological world, social and technical, information, natural and conscious processes. Integral study of these laws largely is a business of the future, but even today we can say that balanced development of technical, social and biological, to prevent environmental disaster – one of the most important principles of general management theory.

Thus, the need for the general theory of management of technical, biological and social systems is really compelling. In theoretical terms is enough to understand the problem as to genus-specific components, namely, management of technical, biological and social systems, lead to a generic concept of management.

Researchers and practitioners feel that the solution is somewhere around. It is not an accident, hopes to harmonize human interaction; nature and technology are centered in a new management concept every time it arises. The concept of sustainable (or sustainable) development gained attention today in almost all fields of human activity, because the human existence is, first of all, the interaction of systems characterized by certain rules and laws of existence, functioning and interaction. Sustainability involves, as many researchers believe, the interaction of natural, biological and social systems in a variety of equilibrium, that is, a development that «meets all the needs of real life, not depriving new generation of opportunities to exist in harmony with nature and develop in the future» [400, c. 59].

The ideology of sustainable development takes into account the interests not only of man but also the habitat, contains a mechanism that allows the mistakes correcting and their avoiding in the future, harmoniously combining economic, social and environmental factors of development in order to improve quality of life, strengthen social peace, recovery of the natural. In 2012, the international community at Rio +20 has adopted the concept of «green economy» and these same hopes for new ideologeme.



We have already indicated the above that theoretical thought can create any science on one condition, if it is theoretically justify its own specific research subject. The more thoroughly it does it, the more effective will be its achievements.

What ways ought we to take to move on, and on the basis of presented material, promote theoretical work in this direction? To demonstrate the importance, depth and content of analytical work we have undertaken to create a philosophical framework, no longer demands, we will reproduce the scope and algorithm of theoretical aspects of a general theory of management of technical, biological and social systems. Recall that the scientific management theory is a logically interconnected system of concepts and statements about properties, relations and laws of a particular set of objects – idealized organizational processes.

The purpose of a scientific theory – introduction of such basic ideal objects and statements about their properties and relationships (laws, principles), that will allow purely logically deducting (building) the maximum number of consequences that with the selection of a particular empirical interpretation will at most adequately match the observed data on the real sphere of organizational interaction between people and objects.

The scheme of ratio of forms of scientific knowledge is as follows:

Fact>Problem>Idea>Paradigm>Concept>Hypothesis>Theory.

Fact is a reliable empirical knowledge about the event that occurred. The fact states, but does not reveal the essence. The fact consists of the following stages: a) observations, b) treatment (processing) of these observations, c) interpretation of processed data.

Problem is the «awareness of ignorance», the fact of lack of knowledge. It cannot be explained by existing knowledge.

The idea – is a paradigm – the concept – the accumulation of knowledge, set of ideas about the phenomenon, i.e. – they are forms of theory maturing.



Hypothesis becomes a theory when it involves previously unseen phenomena later confirmed by practice. Hypothesis – a new sound knowledge that is intended to explain the controversy arose. There are systemic, grounded, but probably unreliable. Converting hypothesis into the theory does not change the content of a hypothesis, as developed reasonable hypothesis is complex, overarching system of knowledge.

Management theory is the highest form of scientific knowledge of the management domain. This is the significant, systemic knowledge that reveals the essence of the phenomenon of management. As the system of knowledge, management theory has a complex structure. The main structural component of the theory is a theoretical model, a system of abstract objects – processes of organizational interaction, are based on which all statements of the theory are built. This theoretical model in a complex manner is to be associated with the mathematical apparatus of the theory.

Stages of formation of scientific management theory, we now use to create a philosophical basis, are the following: a) the starting point of the movement of thought – an empirical object, its certain properties and relations, and b) the thought movement is to strengthen the quantitative measure of the intensity of «observable» properties to the maximum possible threshold value, c) as a result of this, as it seems to be, a purely quantitative change of thinking creates a new (purely imaginary) object – ideal management model that has properties that in principle cannot be observed (organizational consciousness and organizational being).

According to Einstein, there are 2 ways to justify the objective nature of scientific theory, it is about management: external justification of scientific theories – the requirement of practical usefulness, in particular, the possibility of its empirical application. This pragmatic assessment of its value and at the same time a kind of absolute restriction of freedom of mind, inner justification of scientific theories – the ability to be a means of internal improvement, harmonization and growth of logical theoretical



world, effective solution to the existing theoretical problems and setting new ones.

The object of the theory of scientific management theory, that is being idealized, is used for the theoretical interpretation of the original concepts and principles. Definition and adoption of scientific theory have only the meanings provided by the idealized object. The initial basis the scientific theory includes also some logic – a set of rules of inference and mathematical tools.

Diversity of idealization and, accordingly, types of object that are being idealized, equal the diversity of types of theories that can be classified according different reasons (criteria). Depending on this can be distinguished theories: phenomenological and non phenomenological.

First, as a rule, are descriptive (phenomenological) theory, giving a systematic description and classification of the objects – organizational processes. They do not delve deeply into the internal mechanisms. Such theories do not analyze the nature of the phenomena, and therefore does not use any complex abstract objects, although, of course, somewhat schematized and build some idealization scope of the phenomena being studied. Working on the subject of this study, we also carry out schematic and operation management to bring the scope of the heuristic model.

First, the phenomenological theory solves the problem of initial ordering and summarizing the facts relating to them. They are formulated in conventional natural (some would say a professional slang managers) languages involving special terminology of the industry knowledge and are mostly qualitative in nature.

The phenomenological theory researchers face, usually in the early stages of any science, when the accumulation, systematization and generalization of empirical factual material are taking place. Such theories – it is a natural phenomenon in the process of scientific knowledge. And the management is no exception.

With the advancement of scientific knowledge, phenomenological theory gives place to non-phenomenological



(explanatory) theories. They not only reflect the essential relationships between phenomena – in this case it is the management of technical, biological and social systems – and their properties, but also reveal a deep inner mechanism of the phenomena being studied and the processes, their significant interconnections, essential relationships, that is, their laws. But these are not empirical laws any more but rather theoretical laws formulated not directly on the base of experimental data, but rather through certain mental activities with abstract objects that are being idealized. It is in availability of such theory of management that the maturity of science of cybernetics is seen: discipline can be considered credible scientific only with appearance of theories to explain it.

Identifying provided scientific evidence confirms the fertility and truth of the theory. The discrepancy between theory and facts, or identifying the internal contradictions in the theory gives an impulse to change it, to strengthen its idealized object, to review, modify its individual provisions, subsidiary hypotheses, and so on. In some cases, these differences lead scientists to abandon the theory and to replace it with a new theory.

Usually among the theory theses distinguish main concepts and categories for which other statements and concepts are logical or derivatives (derived from them), or clarifications and additions. And among the terms of the management theory should be allocated specific terms (related to its subject), and some of them are key concepts (sometimes referred to as the central category of this theory), while others are either determined through them or are introduced to clarify and supplement concepts of this theory.

Among managers and practitioners, as well as management theorists, especially social management is widely believed that such integration was not realistic and a scientific management theory is not possible create. However, researchers who work in the field of technical management, especially mathematics, have a diametrically opposite opinion. From this technocratism and militant rationalism follow.

Given the content of the three discourses inherent in managing technical, biological and social systems, it seems that reduce them to one basis is fundamentally impossible. Apparently, this fact has generated disbelief among researchers in the possibility of a general theory of management of technical, biological and social systems. As an example, you can give the position of the well-known author of many books on management P. Drucker, who asserts that «management will never be an exact science»; by its nature is not art or even profession, but practice [553]. As rejection to this thesis, is founded and keeps functioning mathematical school in management [99, p. 12].

A similar position is occupied by many other researchers, believing that such a large discourses discrepancy cannot possibly lead to a common denominator and create an organic theory of management of technical, biological and social systems. For example, L. Bessonov wrote: «Although the term» management philosophy is «found in the literature, one cannot assume that this discipline is established» [43]. The author explains why it is impossible. She believes that «the search for common philosophical foundations of management does not lead to positive results, in particular that» the philosophy of pragmatism and empiricism, laid the foundation of American management theories and concepts, reduces the possibility of establishing a methodological framework for the development of the general theory. European science has a stronger philosophical position but is lacking such rich empirical experience in the field of management as the U.S. has» [43].

Close to this is also the position of A. Tikhonov, the author of the excellent book «Sociology of Management. «There was – he writes – a huge market of recommendations to practical experts, how it is better and more efficiently to conduct their business. One «cure» competes with another, and yet there is no consensus in the science of the nature and functions of management, its distinctive features and qualities. We see the reason of this crisis in lacking of deep theoretical and methodological consideration of not just the problem of improving the



efficiency of administrative action, as is traditionally done in the management, but the administration itself as a problem due to its ambiguous and fundamental role in the transformation of modern society. I must admit that, despite the claims of «scientific management, systems analysis, cybernetics and synergetic theory on the role of management, the science does not have theoretically expanded theory of phenomenology of management, understanding of the laws of its generation, construction, operation and development» [455, pp. 32, 33, 122].

The cause of such thoughts and opinions is that we first absolutized management systems with technical systems, that had taken us into blind corner; and now we ran in the opposite direction and absolutize the management of industry, state and society leaving the man out. As rightly noted H. Mintzberg, «our machines and mechanisms ... our social system, and especially our bodies – dulled our senses and mind, deprived of the ability to think intuitively and increasingly complicate the task of proper solution of existing problems. In short, our society has become unmanageable as a direct result of management» [294, p. 390].

Is it a just rebuke to the theory of management? There is merit in understanding, whether the management practitioners are lacking of own theoretical conceptualization or they also need philosophical ideas about management?

If we analyze the theoretical concepts of management theory, we can see that, first, they address management practices (and they do not know firsthand what management is), and secondly – they do not claim to philosophical understanding (there are no general concepts management that define reality and then specified, forcing practitioners to follow the ideal representations of management), and thirdly, theoretical concepts of management are clearly expanding vision of practitioners through analysis of new cases, schematization and meaningful managerial experience.

Another thing is that, as correctly observes Professor Dale E. Zand, most theories of management «is applicable to solve a narrow range of practical problems, explaining some part of reality. Once

you go beyond the narrow confines of the theory, it is not working, or can give distorted results» [Cited. 455, p. 122]. According to V. Rosin, «management theory does not claim to be big generalization. In other words, it is a reflection of management, but not philosophical, but rather of methods (methodological) character» [389, c. 171].

So, we can see that to formalize the philosophical principles of scientific management theory is one thing; however, to create it, the general theory of management of technical, biological and social systems, is quite another matter, but to implement it without philosophical justification is fundamentally impossible.

Conclusions to the sixth chapter

Comparative analysis of the management of technical, biological and social systems showed that the specific form of government are too far apart and do not continue to move towards convergence, but in reverse, continue to diverge. Not having properly stood up, management science began to divide, but its uncontrolled differentiation can be ordered.

Our position on this issue is based on the main concept of this science advanced by historian of science French A. Coir. Moreover, the idea of unity of human knowledge that is the basis of his concept is very fruitful. It holds not implemented but yet possible methodological explanation of the historical development of scientific knowledge. «Scientific knowledge in this era, according to A. Coir, is created not by gradual accumulation of particular elements, but rather by creating the innovative concepts» [371, p. 97]. The appearance at the late twentieth and early twenty-first century synergy and its expansion to the social sector is the proof.



We propose to consider as objects of theoretical analysis for the management of technical systems – «object-object» relationships; for the management theory of biological systems – the «subject-object» relationships, and for the theory of social systems – «subject-subject» relationships. Only under these conditions, the general theory of management of technical, biological and social systems holistically cover the full range of organizational relationships and be able to justify: at their level – common law and laws; at the special, sectoral level – special laws and regularities; ultimately, at the empirical or application level – situational laws and regularities. The structure of theoretical knowledge of sociology may serve as analogue.



CONCLUSIONS

Contradictory and turbulence of the modern world requires an active search for stabilizing, balancing mechanisms of highly complex global relationships and processes in the interests of survival. In general, the impact of emerging under the pressure of globalization of new reality is a powerful, even shocking effect, because it requires determining the relation and dynamics principles of globalization and developing a strategy for behavior management system in accordance with its parade and challenges. This is due to the fact that at the beginning of the third millennium management issues are brought to the forefront of scientific research of philosophers and scientists around the world.

Raising the question of global governance in the real plane is conditioned by fundamental changes in the accumulation process, processing, transmission and use of information that constitute the essence of the information technology revolution, the result of which was to achieve a qualitatively new level of space-time information processes.

This study is a contribution into the overall treasury of management theoretical thought. Its basis is the global trend of globalization, governance, leading to the formation of ontological matrix of the international community, and is accompanied by the development of information and organizational unity of the international community. This means that cultural – historical process, represented as the development of global social organism, tends to achieve the marginal integrity of the latter.

We have formulated the problem situation, the essence of which is to justify the urgency of holistic concept of world view and



ideological formation of general management theory, in view of which the three types of organizational interactions: management of technical, biological and social systems, that is a need arises to bring existing practice paradigmatic diversity of knowledge about three types of control to a common denominator – the generic term «management».

The study has proved the main hypothesis that the accumulated knowledge of paradigmatic three types of organizational relationships in technology, biology and the social world can be reduced to a single semantic pattern by developing management philosophy, which is to highlight their genesis, ideological and ideological components and key philosophical characteristics : nature, nature, content, form, ontology, morphology and functionality.

As a philosophy of solving this problem situation must be innovative outlook that accepts the integrity of the world, has its own logic, structure and activity principles, and it cannot be reduced either to the economy or the culture, or international relations or world politics and ideology dynamic equilibrium of management, which have to be used by leaders of different structural levels of human life, community, society, country and the planetary community.

It is shown that the next stage of global community development should be organized in a dynamic paradigm of ideological balance, because it is the only way to keep the balance in the planetary social body that has a functional nature. As it is a functional system, planetary body is self-destructing of actions of dysfunctions and imbalances. Therefore, management of technical, biological and social systems is an effective tool for maintaining it in safe mode operation and development. This means that, as it is fundamentally impossible to get rid of ideologies of technocracy, environmental safety and humanity, we must synthesize them and find a middle ground – the ideological balance. To this we are also forced by the change the principles of social and economic development of the world community: the principle of dynamic



equilibrium with the principle of sustainable imbalances (E. Bauer).

The logic of research has been identified by the main purpose of scientific research work formulated by the author, which disintegrated into a number of tasks and created six chapters, each of which is dedicated to solving specific aspects of formal study of the problem situation.

The first chapter describes the historical and methodological foundations of the study of philosophical foundations of the general theory of management of technical, biological and social systems. Philosophical foundations of the general theory of the formation of the division is to justify the nature, essence, contents and forms of management of technical, biological and social systems, as well as in shaping organizational awareness, organizational philosophy and culture; creating the ideology and methodology of this study is a conceptual framework for the practical elaboration task of creation the coherent general theory of management.

To meet the needs of the philosophical study of the cognitive basis of formation of general management theory, in practice is formed a separate area of philosophical reflection – management philosophy. Specificity of «management philosophy», i.e. the intellectual area where intersects the interests of philosophy and cognitive control, is that it examines the concept of the place and role of human subject in the control system, as well as forms and ways of their implementation in the operation and development of control systems, process modeling and self-unfolding of possible states of the phenomenon. As an independent discipline, it is based on a dual basis – formal and substantive nature: the formal basis of its appearance caused by the presence of several species in practice philosophies, such as philosophy of science, philosophy of engineering, philosophy of law, philosophy of art, philosophical anthropology and other differentiation as well as meaningful argument *raison d'être* «management philosophy» requires analysis of philosophical thought in terms of mapping the fundamental problems of governance.



Problems and obstacles in developing the general management theory lie in the fact that philosophers, for almost two thousand years, have «not reached» the phenomenon of management, and the management theorists, by contrast, have «not risen» to philosophy. In practice, there exists a situation of neutrality, i.e. «the whole is the sum of its parts». This condition prevents the development of science – cybernetics, the general management theory, the integrative management theory and tectology. In this paper, the terms «cybernetics» and «management» are separated: «cybernetics» is the science of information exchange and «management» is the science of organizational interaction of people and their products – organizations. Information Law, which today is at the stage of development, is enshrining in law the difference between them.

It should be noted that the management of technical and biological systems implemented within the social, since all types of control associated with the joint efforts of people to achieve their objective, but have a different focus (object).

The analysis of the philosophical concepts of East and West in the discourse of their relationship to the phenomenon of management suggests that they take different approaches to its perception: perceived control in the East in the organic unity of technical, biological and social systems and the person who obeys the laws of the whole (monism) and the West – cultivated the opposite approach (pluralism) that absolutizes rationalism and increases the objective-rational ability of man who has everything to subject to will, interests and needs.

In the retrospective analysis of philosophical approaches to organic and general management theory in the space of different cultures, peoples and times revealed that: a) the deep essence of Control constant, changing only the historically specific form of a solution of management problems and b) with philosophical thought, the formation of science (sciences) about management retained and crystallized the basic ideas and theoretical generalizations managerial experience of previous generations, and



c) most philosophers not only capture the state management of society, the state and other social structures, but also looking for the «best» in their form – search characteristic of philosophy as the active form of social consciousness, thinking, aimed at ideals, d) methodological knowledge and use of public-private research and practice management philosophical formulations useful and now, at least not to «reinvent the wheel».

The current state of affairs in the field of management concepts followed by an explosion that consciously or unconsciously aimed at recognition system organismic social world is gravitating to the Chinese world view place and role of the individual in the universe, revealing perspectives generalization ideological basis of general management theory as technical, biological and social system is the product of a single entity – person.

The methodological component of this work is the selection of complex analysis tools for making management philosophy, in the wake of which must be justified specific organizational awareness, organizational philosophy, ideology and methodology of the study of the philosophical foundations of the formation of the general theory of management of technical, biological and social systems. The specificity here is that its components, despite the «human origin», in practice so far apart that we should not generalize specific management concepts that have taken legitimate and stable links of organizational interaction and discourse in which they played. To bring them to the organic unity is suggested to apply the proposed Foucault's *dispositif* (in analyzing the types of management – technical, biological and social body, and comparative analysis – social organism country) that has the ability to bring to the whole diverse characteristics, and, thus, consider their specific. It is recognized that the goals of this study contributes to a systematic approach to study the principle of management philosophy, marked by a number of principles and practices that here is the most efficient, leading technological areas of research recognized method of ascent from the abstract to the concrete.



Categories of creating semantic field of cognitive analysis and facilitates are the creation of analytic algorithms for the analysis of management philosophy.

Thus, at the philosophical level are formed a holistic view of objects of management science research in the plane of managing of technical, biological and social systems, as well as in integrative form – when all these elements are seen as elements of the whole. All this can take to a higher level of understanding of the organizational matrix of a single object – technical, biological, social origin or of society and the planet as a whole.

The second chapter introduces the management philosophy as a young science that is intensive phase formation, despite the diversity of views on its subject matter, principles and methods. The analysis shows that the most positive results in the formalization of the subject under national scientists.

To the structure of the object management philosophy are included: a) ontology management, b) epistemology management, c) logic control, d) axiology management, e) ethics of management, f) management methodology, g) ideology of governance, h) staff management and staff organizations. Formalized is the leading function management philosophy. Among them: the philosophical, epistemological, methodological, prognostic, axiological, diagnostic, simulation, educational, education.

Based on the use of tools belonging to management philosophy, is proved that management activities are «activities at work», that is institutional in nature and are attributive social needs. Its satisfaction is recognized and obligatory in all spheres of human activity. We have shown that: first, the source of phenomena and systems of management of technical, biological and social systems a human being, while the substance – human activity, and secondly, ontologically there are three types of control systems – a modification of the generic phenomena – the organizational interaction of subjects of management and their products have verbalized or subjectified in the structure of personality and



objected in the outer environment, and thirdly, functionally they are served by the same flow of management information that circulates in the space of social interaction; fourthly, the system management share the same characteristics: the philosophical, ideological, morphological, functional and «removed» them in a system of self-regulation dispositif – social organism of the planet, country, specific system. Specific differences of each of the systems are «removed (withdrawn) » accordingly by dispositif of the technical body, biological body, organism or social body.

The relationship between the social institution of power and control system is determined. The semantic nature of management is underlined. It is recognized that philosophy is able to reveal the underlying sources of management, namely organizational consciousness and its properties. The characteristic of its historical segment in which the accumulated knowledge about the stages of social control self-unfolding, and diluted such basic concepts as «self-organization», «leadership» and «management»; is made assessment of multidimensionality of approaches to the study of the phenomenon of management.

It is proved that the organizational philosophy of personality is a universal tool of understanding of social development on the base of principle of stability of equilibrium and is able through organizational culture with the assistance of non-linear thinking and innovative behavior change the vector of development. Theoretically grounded are three steady states for technical, biological and social systems: homeostasis and homeorhesis, homeoklasis; the gravity of each type of system to its stable regime is defined.

Based on ideological narrative is conducted a systematic analysis of discourses management of technical, biological and social systems according to four criteria, namely: a) the ideological and ideological component and categorical apparatus of management concepts; b) the reflection of morphology control system, and c) the nature of the operation and development phenomenon of management. The general conclusion is negative,



because, as human products, subsystems have their own logic and ideology of self- unfolding; they are not open to cooperation but oppose each other. At the same time, they have within the structure of the whole – the social organism in the world – to serve one another.

Research ideology is introduced; it included a set of leading ideology to formalize their main features for philosophical generalization and systematization of the properties of the algorithm: universal, general, special and unique. The leading ideology included the following settings: a) dispositif be organismic idea of being of management with cultivating of which the management of technical, biological and social systems will be considered as organs of integrity – the body of the planet, and b) cognitive analysis of the main philosophical categories should include the determination of: genesis, nature, essence, content, forms, organizational awareness, belief, culture and ideology, c) morphological analysis of the structures of technical, biological and social systems, and d) functional analysis capabilities of managing technical, biological and social development, and e) relating to system of self-regulation of global social organism g) cognitive analysis of the theoretical reproduction management practices of technical, biological and social systems.

In the third chapter achievement consists in using of management philosophy to analyze the origins, development, operation and management of modern technical systems, which include: computer networks, space and military facilities, railways, air transport, nuclear power plants, boilers, aircraft, motor vehicles and other products of innovative engineering. It is in the area of technical systems control, semantic field is reproduced that shows the long path traveled by the researchers and engineers to create systems of control of technical monsters of our time, such as nuclear power plants, LHC, Samsung Galaxy SIII, rover «Curiosity», a Japanese humanoid robot Kuratas, Russian Robot «Eugene» and others. Conclusions arising from the management of technical



systems as a form of social control are as follows: firstly, the foundation was laid down by world view acts that ultimately created ideological and ideological foundation first to create and then manage technical systems. An example is the management philosophy of the modern Internet and other social networks.

Secondly, it is proved that there is an original methodological tool for the design and implementation of complex technical systems. Among their inventions particularly productive were the systems analysis, principles of operational systems, computer-aided design system integrators management of production systems and determining their place and role in computer-aided production management. Thirdly, was formed categorial matrix management of technical systems that can use even fuzzy knowledge and fuzzy neural network to control the social development of modern society. Fourthly, due to the management philosophy, it is possible to identify existing and create new quality paradigm of fuzzy control planetary community. That paradigms are: a) logical control, b) situational management, c) parallel multi- management, d) linguistic intelligent management, d) relational management systems available) adaptive management and others. Fifthly, the presence of so many technical systems management paradigms allow, even require further philosophical generalization, which has to be of intensively occurring, we believe, in two directions, namely the development of the theory of management of technical systems as a logical step in the construction of the above paradigms to the completed form, and further development – to become an integral part of the general theory of management.

Positive and philosophical generalizations concerning management of technical systems that originally provided the human impact on the first nature in a way of a system of machine of search, extraction and processing of natural resources into useful for a man products of work, and now, thanks to the invention of computers, get into a third nature, or semantic horizon (noosphere) that serves our social world, satisfying, mainly intellectual needs.



Exploration in the area of technical systems has a separate assessment of values in terms of the overall goal of this research – clarification of the phenomenon specific to the comparative analysis of the management of biological and social systems. It is noted that the technics quickly cover all the horizons of life of modern man. Biocoenosis – biological life forms on Earth – is increasingly being replaced technocoenosis.

The shift in self-unfolding of a world of technics of machines for the processing natural resources to the system of machines that intervenes in the world of linguistics and semantic substrates is indisputable and observed motion of self-unfolding of the world of technics. For man it is inherent in the component values of social development, as it is based on human needs.

The cause of its appearance, the world of technology, is satisfying a number of needs of a man; first of all, products, primarily food, clothing, housing, vehicles, satisfying, mainly its physical or living needs. Next – mastering the environment as a source of satisfying vital human needs and the scope for further accommodation means the near-Earth space and the so-called near-Earth space. It is emphasized that human activity – from simple to the most complex of its forms – is reduced to organizing / disorganizing processes. This is particularly evident in the nature of contemporary globalization process that has its opposite characteristic – the fragmentation of the social world. This happens also in the field of technology. Management activities are both creative and destructive.

In the overall scheme unfolded before us contents of human life and now we can summarize. F. Engels expressed them, organizational forms confrontation, through formula: production of people, production of things, production of ideas. In term «production» is latent concept of organizing as «the organization of external forces of nature, the organization of human power, the organization of experience» (Alexander Bogdanov). According to the ideology of our study, it is logical to transform the management



of technical, biological and social systems. Man showing here objectified activity as the management of technical systems at the beginning of the XXI century formalized predictable activity that is enshrined in the legal framework of any society.

The achievement of the fourth chapter is the use of management philosophy to analyze the ideological and ideological component of the management of biological systems. It proved that there are no ideological views on sustainable approaches to managing the biosphere. Object of management – so complex that the ideological and administrative activities of the international community were powerless to overcome the crisis of views on this phenomenon. The contents and form of management with superficial character and therefore is not capable of presenting the phenomenon in its entirety problems. A person is limited to the analysis of «hot issues» – environmental issues, such as the extinction of populations, pollution, ozone holes, lacking of drinking water and so on.

The morphology of biosystem is not visible, and there is a need to recreate it in the context of plant, animal and human organisms and organizational forms of their joint existence; it is difficult to design even in thoughts it adequate governance structure of the biota living. At the same time we are seeing at all levels of organization of living systems management elements: subject and object management, program management, the object impact means, homeostasis and feedback. The specific morphology of the governing body is that the subject and object management include general biology, and therefore the interaction with the environment and within a population is a function of the organism.

Functional analysis has shown how complex morphological structure of biological systems provides a functionally rich life living at the level of organisms and population levels. Only the homeostasis kinds are several dozen. While we did not considered at all other levels of morphological unit's existence, such as cellular, cytoplasmic, tissue, system phytocenotic regulation and others.



Complex algorithm of theoretical finding by international community the mechanisms of management of biological systems is reproduced. It has a narrative, since more based on the achievements of practice than the logic of the biosphere. It makes sense to agree with other researchers that at this level of existence of the universe leading type of control should be considered reflexive governance as living organisms have such property as reasonable activity (L. Krushinsky). Reflexive control specific features are presented. In detail is revealed specificity of environmental management that governs human behavior from the perspective of managing environmental determinants of human life in organizational interaction «man – nature – space». It noted that in the life of biological systems management processes occur much more complicate, in comparison with what we have reproduced here, they recreated themselves biological structures – an extremely sophisticated and self-sufficient, and mechanisms – more subtle.

In the fifth chapter the structural and functional analysis allows us to compare the morphology of the system of social systems and its functionality. It identified two typical situations. The first of these concerns the fact that due to morphological immaturity the functional mismatch occurs of body of management and object of management. The second situation is connected with the fact that the organizational exchange, management has morphogenetic function and completes the structure of the control system. In the organizational metabolism the structures completion has long been completed, however, can be changed by new types of production and, consequently, of management. Firstly, the system of social control after the operation phase goes into development, which should be done in a positive algorithm, and in the negative. Morphogenesis of social control at this stage is completed, as homeostasis is formed; it is the third body in the horizon of nature that operates logical units or meanings. Secondly, in the case of a positive alternative, system evolves mode homeorhesis that develops on a sustained imbalance and as a result, it enriches itself



with subsystem of feedback and switches to self-regulation. The paradox in this area is that homeorhesis indeed «carrying» forward existing social system, but homeoklasis is the driving force that gives rise to qualitatively new forms of organization of social life. Thirdly, if implemented adverse algorithm called homeoklasis, it leaves the social arena. The principle of social life is the increase in entropy. Negative algorithm has two phases: latent and open. In the transition from the first to the second system bifurcates and elects a new horizon of development. Fourth, our analysis showed that the government really is a social institution, as the phenomenon has all the necessary features of institutionalization, and it took a number of steps, namely in the social organism of the country quite naturally ripened need for the presence of joint organized response to restore order in relationship between the formation of the overall objectives of the emergence of social norms and rules in the course of spontaneous social interaction in four key areas of society: economic, social, political and ideological, the emergence of procedures relating to the norms and rules of decision-making, institutionalization of norms and rules, procedures, i.e. their adoption and use, establishing a system of sanctions to support the rules and regulations differentiation of their use in some cases, a system of statuses and roles, covering any and all members of the social process.

This list of features is enough to recognize the power of the institution, separate and independent, that in social life serves specific group of people. A management system is the objectified product. Correlation here is the same as between a social institution of religion and the church that is the social system. Fifth, emerging contradictions that drive the social management to improve the structure and functions. Initially, the contradiction was the leading division of power, ownership and control. This question is not only culture, but also the division of labor, rights and responsibilities among the various entities that are responsible for the survival of an independent society and constructing its prospects. Thus, we believe



the government will inevitably give management a dominant role in post-industrial type of social organization, as may be amended and the principle of its formation. Therefore, the final stage of social cohesion can be maintained and new syncretism, syncretism organization and self- management and self-management.

In the sixth section, a comparative analysis of management of technical, biological and social systems showed that the specific forms of government are too far apart and do not continue to move towards convergence, but in reverse, continue to diverge. Not having properly stood up, management science began to divide, but its uncontrolled differentiation can be ordered.

Author's position on this issue is based on the main concept of science development, given by French historian of science A. Coir. Moreover, the idea of the unity of human knowledge that is the basis of his concept is very productive. It holds not implemented but yet possible methodological explanation of the historical development of scientific knowledge. «Scientific knowledge in this era, according to A. Coir, is created not by gradual accumulation, the accumulation of particular its elements, but rather by creating innovative concepts» [371, p. 97]. The appearance at the late twentieth and early twenty-first century synergy and its expansion to the social sector is the illustrative proof.

So, all the tasks we formulated are performed and the purpose of our study is achieved because the phenomenon of management appeared before us as the original content of third nature (of logical world) that in the social world has some forms of manifestation, namely the essential – as the institutional interaction between people; functional – in the form of human activity of management, ontological – as organizational public relations, logical – in the form of organizational knowledge (awareness); substantial – as intelligible matter, noumenological – as phenotypic (social)information; subjectified – in the form of natural or essential powers and organizational consciousness of the individual; objectified – in the form of organizational memory of society and



materialized products about the management and management systems: and natural (physical) – in the form of weak electromagnetic (lepton) radiation. Now it can be considered as a generic term, which specific modifications are withdrawn (removed), namely: the management of technical, biological and social systems.

To do this, we suggest considering as objects of theoretical analysis for the management of technical systems – «object-object» relationships; for the management theory of biological systems – the «subject-object» relationships, and for the theory of social systems – «subject-subject» relationships. Only under these conditions, the general theory of management of technical, biological and social systems holistically cover the full range of organizational relationships and be able to justify: at their level – common law and laws; at the special, sectoral level – special laws and regularities; ultimately, at the empirical or application level – situational laws and regularities. The structure of theoretical knowledge of sociology may serve as analogue.

This is our conclusion is based also on the thought of Albert Einstein that «the problems created by the existing level of thinking cannot be solved at the same level of thinking, i.e. to understand and address the following issues a different level of thinking is need» [239, p. 19]. From this we see commonly acceptable denominator for integration into a single line of research management of technical, biological and social systems, their comparison and direction of finding a general theory of management.

Philosophical foundations and mechanism of formation of general management theory: a) a holistic world view, b) dynamic equilibrium ideology of management, c) social organism of the planet as a dispositif, d) categorical apparatus, or general semantic field (knowledge management), e) available stream of social information, f) tools and methodology of analytical work, g) organizational consciousness; h) organizational culture; i) general



algorithm of making management decisions; j) logic of the generic-aspectual subordination of notions; k) algorithm of the scientific theory development.

Scientific novelty of this study consists in conceptualization of the problem of formation of general theory as an acute social need of modern age, contradiction and tool of managing the vital functions of the international community, as well as conditions to solve this problem, which also serve as means of its formation, defined the level at which it can be developed; the three-tier structure of the management theory is grounded. The results can be summarized in a form of separate statements:

For the first time:

– The mechanism of formation of general philosophical theory of management based on the use of tools such as: a) integral world-view (world wholeness), that is opened for awareness of transition from dynamic balance imperative to innovative unbalanced development; b) dynamic balance ideology in the administrative activity, that has in the conditions of world community development misbalance extremely active borders and is sensitive to correlation and opposition to technocratism, eco-humanism and humanism; c) dispositive – is a social organism of the planet, that finishes the formation of its integrity; d) categorical apparatus of management philosophy or the knowledge about management; e) present stream of social information (general semantic field); f) means and methodology of analytic work; g) organizational consciousness; h) organizational culture; i) general algorithm of making management decisions; j) the logic of the generic-aspectual subordination of notions; k) algorithm of the scientific theory development; l) algorithm for the development of scientific theory.

– a three-tier structure of the general theory of management is given: at the highest level- fundamental organizational theory that obtains the unique only to it elements: the object and purpose of management theory, laws and regularities, its categories; the genesis of administrative activity; the essence, content, forms and types of



management, key concepts (knowledge) of modern management, organizational philosophy, consciousness, culture and ideology of dynamic equilibrium; the structure, levels and functions of management system, feedback management: positive and negative; modes of operation of control systems: homeostasis, and homeorhesis, homeoklasis; management cycle, ripple control systems, personnel and personnel management, principles, methods, and technology management, resource management software : information, material and financial, theory of decision making: criteria and indicators of quality management, the management of the system of self-regulation of natural processes, on average, level – specific technical control theory, biological and social systems, ideologies served under management: technocratism, environmental safety, humanity, each with inherent ontological, cognitive and functional characteristics, on the lower level – specific concepts, paradigms, ideas and hypothesis management that serving corporate governance simplest social organisms of production companies, institutions and organizations, such as the idea of global governance; eco-management, sustainability management, the management of social networking, the paradigm of fuzzy control, gentle management; neuromanagement, reflexive governance etc.

– the concept of organizational human activity to justify the content of the generic concept – «management» is formalized, as the original meaning of the third nature (logical world) that in the social world has some forms of manifestation, namely the essential – as the institutional interaction between people, the functional

– in the form of human activity of management, ontological – as organizational public relations, logical – in the form of organizational knowledge (consciousness); substantial – as intelligible matter, noumenological – as phenotypic (social)information; subjectified – in the form of natural or essential powers and organizational consciousness of the individual; objectified – in the form of organizational memory of society and materialized products about the management and management

systems: and natural (physical) – in the form of weak electromagnetic (lepton) radiation and specific modifications depending on the sphere of application: management of technical, biological and social systems;

– a comparative analysis of management technical, biological and social systems is implemented, and it was stated that its generic forms are too far apart and continue to move not towards convergence, but in reverse, i.e. continue to diverge. Not having properly matured, management science began to split, but its uncontrolled differentiation can be methodized, in my opinion, on the basis of the main core of the concept of scientific development, which lies in the recognition of fertility of the idea of unity of human knowledge (A. Coire) as it includes not implemented yet methodological possibility of explanation of the historical development of scientific knowledge. The author believes that the decision is to be found not by a gradual accumulation, the accumulation of particular elements of knowledge about the specific individual algorithms of management, but by creating a fundamentally new concepts, such as for promoting synergy, information theory, and other sciences;

– incompatible undifferentiated approach to the analysis of management ideology technosphere, biosphere and sociosphere is proved as the first one – has its own logic of self-development (technocenosis) and is directed in the management by the ideology of technocracy and the relevant thinking and outlook, the second – moves under the laws of the ecological community and now goes paradigm of environmental safety corresponding to the type eco-thinking and outlook, as well as environmental management, and the third – has developed a logic of selfdevelopment (socio coenosis), which quickly leads to the social world of globalization and requires objective and categorical denial in the social control theory of technocracy in favor of positive and ecological thinking and humanism with appropriate thinking, holistic world view and innovative ideology, knowledge and culture.



There was improved:

– the knowledge of objective factors that call for a general theory of management as a generic concept for managing technical, biological and social systems, which include : the development of global social organism to achieve the own marginal integrity, the only source of institutional relations and management activities and genetic relationship management types of personality traits a person should be present in the generic phenomena of human intelligence, the only semantic field management of technical, biological and social systems, common components – outlook and ideological component, social services information developed technologies for management, interconnection with the system of self-regulation of the social world that organizes technocoenosis, biocenosis and sociocoenosis interdependence of common space and time, after all, the logic assertion concepts etc.;

– the knowledge of the social area, in which are unfolding organizational relations and described his plane : a) the value-sense and b) the theory, practice, and the mechanism of value-semantic determination and regulation of human behavior in any organizational activity;

– the knowledge about the social nature of the needs of the international community in general management theory, conditions for the formation of this type of conflict in the structure of the social organism country, its existence in the context of globalization and the environment / mechanism to solve it;

– the knowledge about the specific «management philosophy» as an independent discipline, based on a dual basis – formal and substantive nature: the formal basis of its appearance caused by the presence of several species in practice philosophies, such as philosophy of science, philosophy of technology, philosophy of law, philosophical anthropology and other its differentiation as well as substantive argument *raison d'être* «management philosophy» requires analysis of philosophical thought in terms of mapping the fundamental problems of governance;



– the knowledge of the functional persistence of species ideologies: technocracy, eco-humanism and humanism paradigms that direct management of technical, biological and social systems, and the urgent need to seek and justify integration ideologies in management;

– the knowledge of homeostasis as morphological self-regulatory body of technical, biological and social systems, the structure of which must be «fit» any management system.

There were further developed:

– the idea of ontological and functional unity of knowledge about the social structures sociology processed and the level of general management theory that serves them;

– the concept of the identity of the person whose fate depends on its ability to face increased global entropy as a producer of technical and social systems, since the emergence of technical systems are a means of increasing human impact on nature first, and social organizations – means mastering it second nature, or social space;

– the idea of separation of the social institution of power and control, as a social organism, as opposed to the first social institution of authority, has in the structure of people;

– the idea dispositive (M. Foucault) as methodological tools to tie into a unit study plans are important as epistemological plan (discourse – knowledge), descriptive comparative description texts (discourse -rules), analysis of activity- and social contexts and conditions (discourses, practices and discourses, power relations).

Positive outlook study of this problem is the reproducing elements of general management theory as a generic concept, which removed specific features of management of technical, biological and social systems. The possibility of directly indicate many factors: genetic relationship management types of personality traits a person should be present in the generic phenomena of human intelligence, the only semantic field management of technical, biological and social systems, common components – outlook and ideological



component, social care information developed technologies for management, relationship with the system of self-regulation of the social world that organizes technocoenosis, biocoenosis and sociocoenosis interdependence of space and one of time, eventually establishing the concepts of logic, and so on. But that prospect, located outside of scientific exploration.

In this paper the author cannot avoid some mistakes and inaccuracies as research work concerning organic interaction of technical, biological and social systems, and this – the problem field, which is the whole social world in conjunction with the first nature and the cosmos so there is no doubt that there are shortcomings and mistakes in the text.

For each actual amendment and every fact that could conflict with the provisions of the relevant theory or confirm it, the author is extremely grateful to professionals working in these areas. Because it offers a mere philosophical idea of ontological unity of the social world as one of many possible conceptualizations of epistemological conditions for the development of the general theory of management of technical, biological and social systems.

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Appendix A

THE DISTRIBUTION OF MANAGEMENT CONCEPTS BASED ON THE REGIME OF SOCIAL SYSTEM ACTIVITY

<i>System guidelines</i>	<i>Homeostasis</i>	<i>Homeorhesis</i>	<i>Homeoklasis</i>
The leading type of feedback	Negative	Positive	Absent or hyperbolized
The basic principle	Dynamic balance	Stable disbalance	The increase of entropy
The type of action mechanism	Adaptive	Developing	Damaging
The dominant structural distribution of power	On internal job	On outer job	The decay of structural energy source
The ideology of management behavior	Conservative	Revolutionary	Risky
The mediator of organizational interaction	The positive values of society	Meanings	Illusive values and mistaken aims
The driving force of organizational interaction	Managers	Managers-innovators, leaders	Destructive elements of society, movements
The tools of system reproduction	Laws, customs, rituals, traditions	Notional creation, notional outcome	Destructive decisions and actions
The essence of life system	Stability	Development	Decay
The morphology of system	Stable	Getting complicated	Getting demolished
The organization of connections in the system	Stable	Getting complicated	Getting simplified
The nature of structure movement in	Pulsation	Integration	Disintegration



<i>System guidelines</i>	<i>Homeostasis</i>	<i>Homeorhesis</i>	<i>Homeoklasis</i>
internal relations			
The functional means of the system	Stay constant	Getting increased	Dysfunctionality
The table of changes in the system structure	The firmness of functions for solving typical tasks	The increase and enrichment of functions for solving the new tasks	Disappearance of functions and bankruptcy
The correlation of content and form	The correspondence of content to the forms of existence	The content outgoes the form	The form outlives the content
The type of system changes	Fluctuations around the middle line	Progressive	Regressive
The nature of system movement in the outer space	Drift in the defined diapason	Target direction that is limited by the surrounding world	Disappearance from the historical stage
The type of society	Closed	Opened	Stagnant
The system attitude to the surrounding world	Selective	Aggressive	Passive
The systematization of management concepts	Situational management; management models; management targets:	Gentle management; innovative management; neuro management; synergetics management; change management	Crisis management; risk-management
The styles of management	Democratic	Liberal	Authoritarian



**THE COMPERATIVE ANALYSIS OF
PHILOSOPHICAL CHARACTERISTICS OF TECHNICAL,
BIOOLOGICAL AND SOCIAL SYSTEM MANAGEMENT**

№ s/n	The category of philosophical analysis	The general theory of management		
		Technical cybernetics	Biological cybernetics	Economical/Social cybernetics
		The management of technical systems	The management of biological systems	The management of social systems
		The organization of things	The organization of organisms	The organization of people and the organization of ideas (according to O.O. Bohdanov)
	1	2	3	4
I. The Philosophical characteristic				
1.	The level of existence	Inorganic	Organic	Social
2.	The sphere of act	The world of technics	The world of biodiversity	The social world
3.	The world outlook	Technocratic	Ecologically saving, biothentic	Synergetic, the concentration on human beings
4.	The type of thinking, conscious ness and culture	Conservative, technocratic	Ecologically safe, and it is based on the human instincts and intuition	Aggressive, noocratical
5.	Ideology	Technocratism	Ecological humanism, or preservation of biodiversity, and the harmonization of proportions in the relationships <human–	Humanism



			nature – culture (technics)»	
6.	The type of activity	Objective reality	Reflexive activity	Goal-seeking and rational activity
7.	The material to which the management refers	Cosna substance, the products of engineering job (of social purpose)	Living substance, the products of natural origin	The living intelligent substance; the products of social (artificial) destination
8.	The leading process (according to O.O. Bohdanov)	The production of things (F. Engels)	The production of people	The production of ideas
9.	The reason of appearance	The human efforts to satisfy vital needs and conquer the world	The need in adaptation of biological organism to the conditions of environment in order to self-preserve and develop; the problem of realization of cloning, artificial reproduction and breeding chances are added with the human interference	The needs of the individual which led to the division of labor human aggression to the environment in order to conquer it, to enrich and expand the natural habitat, living space on account of the Middle and Far Space
10.	The nature of management	Energo-informational	Informationally substantial	Energo-informational and substantial



	1	2	3	4
11.	The essence of management	The maintenance of technical system in the defined diapason of the function that is achieved by the support of constant meaning of certain parameter / parameters or adaptation to the environment that can change according to the settled algorithm	The supply with the plentiful activity of vegetable, animal and human organisms, taking into consideration the tendencies of evolutional development	The rational activity of specialists or leaders in management based on the value-semantic substrates (values and meanings) in order to provide the stable development in the direction of planetary humanity output in space environment
12.	The content of management	The organization of the interaction between technical processes, piece goods and system products of material and spiritual production	The own development or the preservation of pack	The rational organizational activity during the cultural-historical process, aims at establishing organizational interaction between people and collectives including structural formations such as country, state, financial and industrial groups, some industrial firms, corporations, after all, the



				associations of NGOs, individuals
13.	The forms of management	Technological : –manual; –automatic; – automated (with the help of human)	Vital / ecological	Complex: 1) cultural, which acts on the basis of traditions and rituals ; 2) innovative, which acts on the basis of meaning creation and usage of space meanings and other subjects of planetary life
14.	The typical state of system	Stable homeostasis	Homeostasis with the elements of the stable homeorhesis	Homeorhesis with stable development, mutations and unexpected leaps
15.	The relations	Object-objective	Subject-subjective	Subject-subjective
16.	The manner of management	Conservative	Self-organizing	Mixed value-semantic (archetypical); innovative (the meaning creation); mixed (normative)
17.	The presence of intellect	Artificial intellect as the extent of mind penetration in the Cosna substance	Natural intellect	Natural intellect interacting with artificial intellect, noosphere and space intellect
18.	The prevailing type of causality	Casually mechanical	Teleological	Free



**THE COMPERATIVE ANALYSIS OF
MORPHOLOGICAL CHARACTERISTICS OF TECHNICAL,
BIOOLOGICAL AND SOCIAL SYSTEM MANAGEMENT**

№ п/п	The category of morphologi cal analysis	The general theory of management		
		The management of technical systems	The management of biological systems	The management of social systems
	1	2	3	4
The morphological analysis				
1.	The subjects of managemen t	An Operator; An engineer ; A controller ; The controlled machine (ACS, CAM system)	The leader	The manager, leader or specialized collective groups, e.g. ministries, commissions, parliament. In the informal sector there are clans, mafia, shadow government offices
2.	The objects of managemen t	The technical, technological, transport, power management processes	The biological processes (natural metabolism)	The social processes (social metabolism)
3.	The typology or distribution of managemen t source	Outer	Internal	Mixed: own internal and artificially external ; inner-system in the structure of human organism that is artificially intensified outside by the computer network



4.	The body of management	The object of management and management system that are artificially produced by humans	The nervous and humeral systems of regulation which have biological origin (according to I. Shmalhauzen)	The political system of society or its organizational formations, e.g. the European Parliament in OSCE
5.	The morphology of the body of management influence	Device; Body; Subsystem;	The reflexive system of biological organisms	The bodiless subject – the cybernetic system that is formed on the basis of the semantic natural union – the human being who is enriched with artificial informational network in the society
6.	The complication of the morphology of system management is defined by:	The structure is defined by two factors: 1) the measurement of system or the general quantity of system parameters which characterize its condition; 2) the complexity of system structure that is defined by the general quantity of	By the structure of biological organism which has cellular, tissue, organist levels and subsystems of regulation	By the development of human intellect and the level of STR that supplies the participation in the ACS process, the artificial intellect and intellect from another planet



		bounds between its elements and their diversity		
7.	The principal of morphological structure	Three fundamental principles: 1) the unlocked management; 2) the locked management (feedback); 3) the compensation of refusals /disturbance	Living biological organism	The living biological organism, the self-organization of noospheric origin – the bodiless subject
8.	The levels of management – vertical dimension	Systematic: 1) object or network; 2) objects in the network or webs	Cellular ; Organic ; organismal; overorganismal ; systematic – populations, bioc(o)enosis	Planetary; transnational ; intercontinental ; continental ; state ; superpower; sectoral; regional; corporative; self-management
9.	Institutional design	Artificial apparatus; device; body; system (ACS)	The natural organ or function	The special social institutions – the superpower formations such as the United Nations, UNESCO, OSCE, country, organized labors, social institutions (education, culture, science), the Electronic Government



10.	The type of structure that is served	Stable as it is created under the condition of certain environment and realization of defined functions	Stable, limited by the biological laws and regularities of thermodynamics	Open, dynamic / closed, conservative, social system (society)
11.	The channel of influence	Special communicational channels of informational link	The channels of informational metabolism	The channels of social metabolism with the usage of artificial devices and technologies, e.g. the psycholinguistic programming of human behavior



**COMPARATIVE ANALYSIS
OF FUNCTIONAL CHARACTERISTICS TECHNICAL, BIOLOGICAL AND
SOCIAL SYSTEMS MANAGEMENT**

№	Functional analysis category	General management theory		
		Technical systems management	Biological systems management	Social systems management
	1	2	3	4
I. Functional characteristics				
1.	Functions of management	Artificially made by man under an individual process or group of processes, e. g. autopilot	Activated by nature of the biological organism and conditions of its natural habitat (captivity)	Elaborated by man during cultural and historical process: classical, closed on a management loop of making decisions
2.	Space in which function of management is implemented	Artificial (technical) system, or cyborg, android	Living plant, animal and human organisms	Social structures: personalities, genus, tribe, family, community, company, region, branch, society, body of the country, supraorganismal systems – supragovernment organizations (UNO, UNESCO, OSCE)
3.	Temporality or time dimension	Validity of the system determines the system designer	From a few seconds to centuries and millennia	From one-day firms to civilizations which existed about 1200 years
4.	Pulsation of management system	Cyclist set by the aim of management, which is laid by designer	Cyclists set by pulse of biological organism and his organizational formation (pack,	Cyclist, which is determined so called management loop of making decisions and natural



			community) or a person	fluctuations of fila of global intellect
5.	Properties or attributive features	Steadiness	Irritability; excitability; excitation; galling; reflexivity and instinct of self-preservation	Ability to democratization, humanization, deconsentration, desentralization, delegation of authority, ecologication, intensification etc.
6.	Object responses to influence of management	Self-settings of parameters	Natural self-organization and self-regulation: indigo children and people crystals or change of natural habitat	Natural and artificial self-organization and self-regulation of new created structures and restricting already existed ones, creation artificial surrounding for life – astronautics
7.	Principles of management	<ul style="list-style-type: none"> • Principle of regulation for deviation; • Principle of regulation for disturbance; • Combined regulation principle; • Adaptation principle 	Energy minimum principle	More than 40 principles of control which is affirmed their disorder, but the dominating are: 1) the law of preservation of energy; 2) the law of preservation of time



	1	2	3	4
8.	Methods of management	Mathematical modeling, programming, research of operations	Instinctive reactions or reflexes	Economical; social; political; ideological; organizational; psychological
9.	Levels of management	Upper limitation (limit); (EOM) /lower limitation; (transducer) (sensitivity range)	Range defined by state of living organism and natural habitat	Universal
10.	Mode of action management influence body	Algorithm of management considering dynamic properties of the system, physical and technical limits	Determined by animal instinct or by human command	Determined by state policy/ institution and technology of management activity, desires and ideals of human
11.	Control instrument	Information and analytical devices	Body temperature; food; pulsation; breathing; circulation of the blood; oxidation and renewals reactions	Senses; archetypes; ideas; values; norms
12.	Information support	Information banks; processor; rote memory of PC	Instinct / reactions of genotype	Human memory and social memory of ethnos/genos/nation
13.	Type of information that involved to the management process	Social and technical information	Genotypic + socially acquired elements /phenotypic	Genotypic + phenotypic(social) + space

14.	Conduct form of management system	Set	Unmotivated; reflective; Teleological	Motivated; aimrational
15.	Style of management	For selected parameter or following	Aggressive or peace	Liberal; authoritarian; democratical; conservative; totalitarian; innovative
16.	Types of influence	Informational and energetic	Substrate structural and structural substrate	Energy informational and material
17.	Forms of use power in management	Informational influence due to structural information	Forced material with elements of semantic influence	Combined: physical violence integrated with semantic influence
18.	Quality control of management	Mechanical feedback (positive and negative at rise in temperature above a given, reduced heat flux rises during its fall)	Condition of biological system of animal /plants or stability of population of living organisms animals/plants	Social control for feedback principle: agents – community councils, public opinion, mass media civil society as fourth branch of pover
19.	Effectively criteria	Morphological integrity and stability of operation /home ostasis	Stability of development of biological organism/ homeorhesis	Human well-being, freedom and creativity historical process subjects
20.	Quality indicators of management influence	Quantitative	Mixed	Qualitative



**COMPARATIVE ANALYSIS
OF FUNCTIONAL CHARACTERISTICS TECHNICAL, BIOLOGICAL AND
SOCIAL SYSTEMS MANAGEMENT
IN THE SELF-REGULATION SYSTEM**

№	Functional analysis category	General management theory		
		Technical systems management	Biological systems management	Social systems management
II. Self-regulation				
1.	Type of system	Appointed by former	Appointed by characteristics of organism and accommodation (natural habitat)	Stochastic credible, stipulated for the aim, values, desires of human or ones collective entities
2.	Levels of self-regulation and its instrument	1–3 levels depending on concluded by algorithm program	32 regulation levels	3 levels 1) archetypal (taboo, taleon,...); 2) normative (morality and law); 3) informational and sign (senses, ideas, concepts....) By N. Krochmal [look. : 496]
3.	Creation of system of self-regulation	On the basis of reliability, minimal energy consumption and material capacity financial expenses for creating and servicing	On the basis of Ha oCHOBI functional unity centralized and autonomic management what is kept in biological organism[74, p. 79]	On the basis of labor division in the sphere of organization by means of separation autonomic and centralized (capital, region), individual and collective centers of management social life with the use of computer network



4.	Terms of outlet on the self-regulation level provided by	Opportunity of creation artificial intellect	Conditioned by health of physical organism of creature\animal	Social system self-regulation organ – homeostasis which produced automatically
5.	Self-regulation realization mechanism	Laid in the management program under the tracking principle	Realized by autonomic mechanisms (cellular, molecular, tissue, separate body)until deviations appeared what demanded participation of central management mechanisms [74, p. 79]	By struggle of contradictions what inherent to social world and universe as a whole
6.	Range of regulation	Artificially set during the objectification	Unconscious	Subconscious-conscious – underconscious/un derconscious



**COMPARATIVE ANALYSIS
OF COGNITIVE CHARACTERISTICS TECHNICAL, BIOLOGICAL AND
SOCIAL SYSTEMS MANAGEMENT**

№	Cognitive analysis category	General management theory		
		Technical systems management	Biological systems management	Social systems management
I. Cognitive analysis				
1.	Theoretical execution	Theory of automatic management (TAM) As «set of actions directed on maintain or improving of managed object functioning without direct human participation in accordance with given management aim»	Management theory of biological systems: 1) bioengineering; 2) biological cybernetics; 3) bioinformatics; 4) bionics; 5) medical cybernetics; 6) neurocybernetic; 7) homeostasis; 8) synthetic biology; 9) system biology	<ul style="list-style-type: none"> • Management theory; • Social management theory; • Social process management theory
2.	Subject of science	Object-objective relations derivative or objectivised relations	Subject-object relations under the principle: <ul style="list-style-type: none"> • “predator-victim” • “female-male” • “parents – children” 	Subject-subjective relations under the principle: man is a friend and brother or by Bible «all brothers and sisters in Christ i”
3.	Methods of investigation	<ul style="list-style-type: none"> • Mathematics and analitical; • experimental; • modeling 	1) System (hierarchy: system, subsystem and undersystem); 2) Called holistic (“black box»); 3) Reducing that	Synergetic; dialectical; system; historical; logical; induction and deduction; social modeling



			<p>is analysis of one part of the whole;</p> <p>4) Three main groups of methods:</p> <p>a) field observation;</p> <p>б) experiments in the field and laboratory i;</p> <p>в) modeling</p>	<p>and prediction; analysis and synthesis</p>
4.	<p>Theoretical core of cybernetics what served by branch management</p>	<ul style="list-style-type: none"> • Automatic management theory ; • General theories linear regulators; • Information theory; • Coding theory; • Algorithm and automatic devices theory; • General theory of systems; • Theory of image recognition; • Formal language theory 	<p>1) Complex adaptive system;</p> <p>2) Complex systems;</p> <p>3) Theory of complex systems</p>	<p>Theory of human relations</p>
5.	<p>Self-opening stages</p>	<ul style="list-style-type: none"> • Beforecyberthetical; • cyberthetical; • aftercyberthetical 	<ul style="list-style-type: none"> • beforeecological; • ecological; • ecofuture 	<p>Protomanagement, nucleation – from the moment of ripening personality ;</p> <p>formation –from beginning XX to beginning XXI centuries;</p> <p>functioning –</p>



				from beginning XXI century to transition of hand levers of society and progress in democratization course
6.	Mode laws of functioning	Mathematical logic laws	<ol style="list-style-type: none"> 1. Kommarena's laws; 2. minimum law; 3. Shelford tolerance law; 4. Competitive exclusion law; 5. Laws of Vernadskii; 6. Ecosystem progress law; 7. Thermodynamic laws in ecology; 8. Other ecology laws 	<ol style="list-style-type: none"> 1) Moral laws; 2) rights laws
7.	General laws what provide autopoezys of systems	3 laws of Ch. Darwin theory : a) variability; b) selection; c) heredity		

Genesis and structure of general theory of management

Reflection of the subject Field	Organizational Level of GMT	Specifics of Theoretical Generalization of Management Processes	Types of Theories, Conceptions, Paradigms, Ideas	Subject matter of theories, conceptions, paradigms, ideas
<p><i>Display and perception of the general principles of management operation and development (organizational interaction)</i></p>	<p>Preconditions of Formation of General Management Theory</p>	<p><i>Sources of General Management Theory Formation</i></p>	<ul style="list-style-type: none"> • Theory of self-regulation (deductive approach); • General theory of organization (deductive approach) 	<ul style="list-style-type: none"> • Management paradigm in the system of self-regulation of natural processes; • O. Bogdanov's tectology
			<ul style="list-style-type: none"> • Theory of cybernetics (inductive approach); 	<ul style="list-style-type: none"> • Management of technical, biological and social systems;
			<ul style="list-style-type: none"> • Logic; • culture; • law; • politics; • morality: public, family, religious; • psychology; • economics; • ergonomics, industrial engineering (technology) 	<ul style="list-style-type: none"> • Meanings, conditionality and interdependence of management factors; • values; • norm of law, legislative acts, laws, efficiency, political expediency; • rules of morality, patterns of behavior; • public opinion



				<ul style="list-style-type: none"> in management, feedback; • prime cost, cost effectiveness; • energy efficiency
		<p><i>Development Tools of General Management Theory</i></p>	<ul style="list-style-type: none"> • Management philosophy, that forms the comprehensive <i>world-view</i> for individual's perception of stable non-equilibrium of social development and directs its development to dynamic equilibrium based on <i>the principle of harmony and ideology</i> 	<ul style="list-style-type: none"> • Nature of management; • genesis of management activity; • essence, content, forms and types of management; • organizational world-view, conscience, culture; • ideology of management; • models of management systems; • place and role of personality in management
			<ul style="list-style-type: none"> • Management methodology: pluralistic 	<ul style="list-style-type: none"> • Approaches and principles of research; • research methods; • categorical set as an instrument for research
			<ul style="list-style-type: none"> • History of management • Experience of management: 	<ul style="list-style-type: none"> • American management (pragmatism); • European management



			<p>international and national</p> <ul style="list-style-type: none"> • Practice of current branch, regional and corporate management; • Innovations in management: search for new ideas, design of management systems 	<p>(humanism and rationalism);</p> <ul style="list-style-type: none"> • Japanese management (collectivism and responsibility); • religious management (fanaticism, irrationalism); • dictatorship (stiffness); • democracy (allocation of rights, obligations and responsibility) 	
<i>High Level</i>		General management theory	Fundamental Background of Management Theory	<ul style="list-style-type: none"> • General theory of organization (O. Bogdanov's tectology); • theory of cybernetics; • theory of self-regulation of social world; • theory of organization (B. Milner); • general system theory (systemology); • systematic social theory (social 	<ul style="list-style-type: none"> • Object and subject of management theory; • framework of categories and concepts of management theory; • management laws and regulations; • structure, levels and functions of management system; • feedback in the management: positive and negative;



				<p>systemology by Y. Rieznik);</p> <ul style="list-style-type: none"> • social management theory (social management); • decision-making theory; • feedback theory; • conception of fuzzy knowledge theory; • conception of public management; • paradigms of fuzzy management 	<ul style="list-style-type: none"> • management cycle, rhythm of management systems; • management authorities: human resources and administration officials; • culture of management, organizational culture, organizational knowledge, organizational consciousness; • principles, methods and instruments of management; • management technologies; • resource provision of management: informational, material and financial; • functioning modes of management systems: homeostasis, homeorhesis, homeoklasis; • criteria and indicators of management quality;
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					<ul style="list-style-type: none"> • bureaucratization of management apparatus
Conceptual generalization based on branch-wise verification empirical data	<i>Middle Level</i>	Industrial Cybernetics	Management of Engineering Systems	Theory of automatic management; <ul style="list-style-type: none"> • general theories linear controllers; • information theory; • coding theory; • theory of algorithms and automata; • general system theory; • image recognition theory; • formal language theory 	<ul style="list-style-type: none"> • Object management; • process management; • manual control (human control); • automatic control; • computer-assisted management (human-assisted); • management of space objects (ISS), devices



					(cloning)
			Management of Social Systems	<ul style="list-style-type: none"> • Theory of state management; • theory of local government; • theory of staff policy; • concept of global management; • concept of sustainability management; • concept of social networks management; • concept of Electronic Government 	<ul style="list-style-type: none"> • Management of global society; • Management of supranational and interstate organizations; • state management; • managing society and territories; • management of social organizations
<i>Special concepts, paradigms, ideas and hypotheses of management</i>	Low Level	Specific Management	Management of Corporate Structures	<ul style="list-style-type: none"> • Management of production company; • innovation management; • soft management; • personnel management; • management of educational institution; • knowledge management 	<ul style="list-style-type: none"> • Management of companies, organizations and institutions; • management of civil / non-governmental organizations, NGOs, CSOs; • control of technological processes; • resource management: information, material and financial



					<p>resources;</p> <ul style="list-style-type: none"> • human resource management (personnel); • financial management and investment management
			Network Management	<ul style="list-style-type: none"> • Theory of social communications; • theory of space communications; • theory of political communication 	<ul style="list-style-type: none"> • Management of people's interaction in social networks; • Management of specific network structures: state, military, industrial, corporate, • management network design
			Management of Combined (Synthetic) Systems	<ul style="list-style-type: none"> • Theory • conception • paradigm 	<ul style="list-style-type: none"> • Management of biosocial systems • management of socio-technical systems; • management of anthropotechnical systems; • management of biotechnical systems
			Management of Individuals	<ul style="list-style-type: none"> • The concept of self-management; • concept of life management; 	<ul style="list-style-type: none"> • Management of human personality; • management of individual life processes;



				<ul style="list-style-type: none">• concept of time management;• concept of neuromanagement	<ul style="list-style-type: none">• management of behavior in society;• management of professional (commercial) activities;• management of free time (leisure)
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COMPARATIVE ANALYSIS OF CHARACTERISTICS OF TECHNICAL BIOLOGICAL AND SOCIAL SYSTEMS MANAGING IN A DISCOURSE OF SELF-ORGANIZATION AND SELF-REGULATION

№	Categories of cognitive analysis	General management theory		
		Technical systems	Biological systems	Social systems
Self-organization of systems				
1.	Kind of system	Determined by a developer	determined by properties of the organism and conditions (habitat)of accommodation	Stochastic probabilistic, defined by purpose, values, desires or its collective entities
2.	Main principles of self-organization	Main principles [671] <ul style="list-style-type: none"> • Natural systems are nonlinear, of different organizing kinds: dynamically stable, adaptive and the most difficult – evolving system. Connection between them are made by chaotic, nonequilibrium state of neighboring levels. • Disequilibriums are necessary condition of a new organization, new order, new systems, namely – development appearing. • When nonlinear dynamic systems are joined together, new creations are not equal to the sum of all parts, but create a new system of another organization. • Disequilibriums, spontaneous formation of new local conditions, changes in the macroscopic (system) level, the emergence of new properties, stages of formation of self-organization and fixation of new features are common for all evolving systems. • Developing systems are always opened (exchanging energy, information and substance with environment), due to this process of local ordering and orgsnization take place. • Being very unstable systems begin to accept those superficial factors of influence that they would not accept while being more stable. 		



		<ul style="list-style-type: none"> • relative independence of system elements gives way to corporate behavior items in non-equilibrium conditions: close to equilibrium element interacts only with its neighbors, far from equilibrium – «sees» the entire system and fully consistent behavior of elements increases. • Being in states far from equilibrium, bifurcation mechanisms begin to act – the existence of bifurcation points moves to a particular long termed regime system – attractor. There is no way to predict which of the possible attractors the system will take.
<p>3. Mechanism of self-organization</p>		<p>Synergetics explains the process of self-organization in the complicated systems in this way [Ошибка! Источник ссылки не найден.]:</p> <ul style="list-style-type: none"> • The system has to be opened. According to the laws of thermodynamics closed system has to become a state with the maximal entropy and to stop any evolution as a result. • Opened system has to be quite far from the point of thermodynamic equilibrium. In equilibrium arbitrarily complex system has maximum entropy, and incapable to any of self-organization. The provision, which is close to equilibrium and without sufficient flow of energy from the outside, any system over time will become closer to equilibrium and stop changing their condition.. • Fundamental principle of self-organization is appearing of a new order and complication of systems through the fluctuation (accidental deviations) of their element and subsystem states. Such fluctuations as a rule are suppressed in all dynamically stable and adaptive systems by negative feedbacks to ensure the safety of the structure and are close to the equilibrium state of the system. But due to the flow of energy from outside and strengthening disequilibrium more complicated opened systems deviations increase with time, accumulate, causing the effect of collective behavior of components and subsystems and finally, lead to a «loosening» of the former order and after a relatively short chaotic state of the system lead either to the destruction of the former structure or to the emergence of a new order. As fluctuation are of random nature, so the appearance of any innovations in the world (evolutions, revolutions, disasters) are caused by action of a number of accidental factors. Antic philosophers Epicurus (341 – 270 B.C.) and Karl Lucretius (99–45 B.C.) mentioned this.



		<ul style="list-style-type: none"> • Phase of self-organization comes only if positive feedbacks, which functionate in the open system, predominate over negative feedbacks. Functioning of dynamically stable. Functioning of dynamically stable, non-evolving, but adaptive systems – as it is both homeostasis of living organisms, and automatic devices – is based on receiving feedback signals from receptors or sensors relative to the position of the system and further adjustment of that provision to its original state by executive mechanisms. In the system towards self-organization these changes are not eliminated but accumulated and amplified as a result of general positive system reactivity, that may lead to existing of new order and structures. These are, for example, mechanisms of phase transitions of the substance or the formation of new social formations. • Self-organization in the difficult systems, transition from one structures to another, existence of new levels of matter organization is accompanied by symmetry breaking. While discussing evolution processes it is necessary to refuse time symmetry, that is typical for fully determined and reversible processes in classical mechanics. Self-organization in complicated and open dissipative systems, which include both Life and Mind, and according to the general theory of relativity and the entire universe as a whole, leading to irreversible destruction of the old and the emergence of new structures and systems, that determines the existence of «arrows of time» in nature along with the phenomenon of the increase of entropy in closed systems. 	
Self-regulation of systems			
4.	Levels of self-regulation and its tool	1–3 levels depending on PIBHI the algorithm mortgaged by program	32 regulation levels 3 levels: 1) archetypal (taboo taleon etc.) 2) normative (morality and law) 3) informationa l and signal (meanings, ideas, concepts, etc.)



5.	Creation of self-regulation system	Based on the reliability, minimal energy consumption and material consumption, financial expenses for creation and servicing	Based on functional unity of centralized and autonomous management, which is held in a biological organism	Based on the division of labor in the organization by separating autonomous and centralized (the capital city region) individual and collective social life control centers using computer networks.
6.	Conditions of outputting to the level self-regulation provided	Opportunity of creating the artificial intellect.	Conditioned by physical health of the body creature \ animals	Self-regulatory body of the social system – homeostat that is generated automatically
7.	Mechanism of self-regulation realization	Founded in the management program on the principle of tracking	Implemented by autonomous mechanisms (cellular, molecular, tissue, separate organ) until the deviation does not appear that requires the participation of central management mechanisms	The struggle of contradictions inherent in the social world and the universe as a whole
8.	The range of regulation	Artificially specified range by constructor	Unconscious	Subconscious-conscious – overconscious \ overconscious



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Наукове видання

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**PHILOSOPHICAL MODE OF THE GENERAL
MANAGEMENT THEORY**

Монографія



Підписано до друку 27.04.2015.

Формат 60x84/16 Папір офсетний. Гарнітура Таймс. Друк офсетний.

Умовн. друк. арк. 29,87. Облік. видав. арк. 21,38.

Наклад 500 прим. Зам №135

Віддруковано з оригіналів

Видавництво Національного педагогічного університету
імені М. П. Драгоманова. 01030, м. Київ, вул. Пирогова, 9.
Свідоцтво про реєстрацію № 1101 від 29.10.2002
(044) 239-30-26