**Second Order Science and Autoreflexion: Cyber-Systemic Perspectives**

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Since the second half of the XX century there has been an exponential growth of technological advances, along with the differentiation of Sciences. Today we can say that the fundamental science is ahead of technology, and the resulting backlog is now being implemented in new technologies. However, the lack of mass "request" from the technology to fundamental science is not conducive to intensive development. An interdisciplinary approach is becoming a major scientific approach, and it must operate for a variety of sciences with common results and laws. Crisis management in the problems of social systems is impossible without a search common to all areas of conceptual foundations of management. It is necessary to create a communicative space for representatives from different areas of knowledge related to management to coordinate their joint activities. These objectives are reflected in the different interpretations of an interdisciplinary approach. Unlike Wiener’s cybernetics, second-order cybernetics is conceptual and philosophical. Moreover, today the role of reflexive activity increases and communicative reflexive activity (V. Lefebvre, S. Umpleby, K. Müller) is becoming a major problem. Going from the management of the "subject - object" paradigm to a "subject - subject" paradigm led to the formation of new types of management: reflexive control, information management, active control systems.

Becoming paradigm "subject - self-developing poly subject environment" is inextricably linked with the development of a subject-oriented approach. This approach is a natural development of the subject-activity approach, with increasing attention to the subjects and their environment, and with a decrease in attention to the activity-related component due to a sharp reduction in the impact of the regulatory component of the actions of the subjects in the conditions of modern reality. In the context of scientific rationality it is clearly visible and the evolution of species from the classic management control to the "soft" forms of management through social media. Fundamental changes are occurring in management models, particularly striking changes are in the macro social systems - from the dominance of human-dimension models with extensive use of mathematical models.

The focus of post-non-classical scientific rationality is the ethics of strategic subjects self-developing media, focusing particularly on the problem of preserving the integrity of the subjects and their assembly. In the context of post-non-classical scientific rationality takes place to ensure the integration of control mechanisms specific to the integrity of all types of scientific rationality. Accordingly, there are three mechanisms to ensure the integrity of the target: classical, non-classical, and post-non-classical. If in the context of classical and non-classical scientific rationality second-order cybernetics and cybernetics were providing the control problems, then in the context of post-non-classical science, the centers of governance issues move into philosophy, synergy, political and economic sciences.

Actual problems of the institutionalization of areas of knowledge management to ensure responsive, perhaps it will be replaced by a third-order cybernetics (cybernetics of self-developing environments). For second-order cybernetics, the key terms are: recursive, self, reflexion. A promising area of cybernetics development is the development of the theory based on the ideas of autoreflexion. Third order cybernetics could be formed on the basis of the thesis "of observing systems to the self-developing systems." At the same time managing to gradually transform into a wide range of processes to ensure self-development systems of social control, encouragement, support, moderation, organization, "assembly and disassembly" of subjects (V.E. Lepskiy). This approach is one of the ways the evolution of cybernetics and claims the new mainstream of classical cybernetics. Relevant are the following management tasks classes: network-centric systems (including military applications), information management and cyber security, lifecycle management of complex organizational-technical systems, systems engineering activity. Promising areas of application are: living systems, social systems, transport, and energy.