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## Bioinformatics 2018: On the Core Theory of Process Interactions and Cohesion as its Integral Effect - Korolev Petr Mikhailovich, Studia Koroleva Int., Russia

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**Aim:** The aim of the work is to develop the core theory of interaction of the processes, such as problematization, schematization, objectification, positioning. These processes are the constructs of the technology of organization and management of thought processes. As a focus, we chose what makes the group holistic and cohesive. Taking as a basis the experience of discussing these processes and their interactions, the authors develop two versions of the theory, introducing methods of combinatorics and discrete mathematics into the constructive field.

Findings: The metric basis of the core theory of interaction leading to cohesion is constructed, hypotheses of symmetry of processes are put forward and laws of interaction are offered. In the article, research restrictions related to the enneadic metric are adopted; the method of analogy with the core theory of modern physics of F. Wilczek is used. An application is presented in the form of a game with representatives of the value categories that make up the corporate philosophy of bio informatics. The results of the article are of practical use in the development of the microbiology. The proposed theory can be applied to the development of an optimal set of tools for gene ontology, taking such tools as AMIGO, OBO-EDIT as the analyzed material. Game simulation and modeling can also be improved by applying cohesion theory. An analysis of the quantitative understanding of the biological system, as well as the possibility of predicting systemic features that are the goal of system biology, and the field of its application, related to the consideration of nonlinearity, may also include a theory of cohesion. In pharmaceuticals and the development of drugs in terms of their effects on the body, the effect of cohesion is important. The architecture of the core theory is original, the theory is important for programming and controlling life processes. Applying the core theory of cohesion to bioinformatics, to such aspects of it which tracks 1, 7, 8, and 13 are represented. Suppose that these tracks may be describe in some categories. We define carriers of these categories and involve them into game where the processes leading to cohesion will imposed on the categories and their constellations. The categories may be developed as processes of standardization, attribution, technologizing, simulation, modelling, verification, validation, falsification, design, projecting, goal-putting, linearization, identification and estimation of effect. These processes interact each other forming knowledge on situation in bioinformatics, system biology, nanotechnology and other fields; they interact also with processes of problematization, objectivation, localization and schematization. Output of the multilayered fusion and design new approaches to organization, cooperation and collaboration the representatives of categories attain new prospects in their work on the categorial development, and, respectively, the content of the tracks' horizons.

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