

Knowledge, complexity, self-organization and social systems

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We consider knowledge production and organization as a self-organization process intrinsically related to social structures and systems, thus forming a social self-organization process. Knowledge is modeled as information transferring process in the social sphere while social systems are considered as self-organizing systems in the social realm. Information transfer is studied in the context of creation of innovations, which are considered as new combinations of knowledge. This process has an individual and group dimension, connected through cooperation at the horizontal level corresponding to the individual or group aspect, as well as through cooperation between those aspects. The approach is modeled in a two fold manner. In the first we use the variant of the network approach which relies on the topological representation of networks as simplicial complexes. This model assumes that the social and knowledge spaces as form multiplex network, often with different yet complementary characteristics. In the second approach we use the multi-agent model where we study knowledge formation as a process which self-organizes the underlying network of agents. This approach also assumes that agents, through the mechanism of information transfer, actively contribute to the self-organization of knowledge.

We also present plans for future research activities within our group.

References:

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