Sociocybernetics and Information Management in Organizations

Ludmila Malinova
University of Economics in Prague, Faculty of informatics and statistics, Czech Republic
ludmila.malinova@vse.cz

Abstract
The PhD thesis is dedicated to the creation of methodology for strategic management. The thesis will utilize the concepts of sociocybernetics and information management. Future research in the tourism industry shall elaborate how to manage such organizations in turbulent and complex environment. The thesis will focus on the optimization of organizational process based on the incorporation of selected methods. The impact will be on individuals in organizations, who have the power to influence how the organization will behave in an organizational environment, how to increase the efficiency of provided services and how to achieve satisfied employees and customers.

Keywords: Sociocybernetics, knowledge, information, management, methodology, social networks

1 Introduction
The world around us is not simple. We are not able to describe it with functions and predict it with models and simulations. The environment is very complex and everything has a meaning. Last year, I finished my diploma thesis on the topic “The application of Sociocybernetics in Organizational Analysis”. My mentor, Ing. Antonin Rosicky, showed me all the concepts, authors and how the complex global environment has been instantly changing. The thesis is seen as a valuable contribution to the topic, how the nowadays organizations should be managed. Last year I started my PhD studies, therefore, I have been collecting data and information and I am currently working on literature research. This paper contains information about further development of my PhD thesis (Rosický, 2009).

2 Brief introduction to the theme
Classical cybernetics is interdisciplinary science. It is focused to studying complex systems. Cybernetics is not only science of numbers and functions. It is rooted in cognizance of artificial and biological systems. The aim is to show differences and patterns in behavior of different kind of systems. Each science has its own
nomenclature. Cybernetics covers all that sciences with focus on common sense of world around us (Luhmann, 2006).

Sociocybernetics (social cybernetics) is cybernetics of the second order. This science evolve from cybernetics. It shows us that we are not able to describe systems. There are a few reasons: 1) Occasionalism of systems, 2) social component of each system, 3) autopoiesis – self-organization of social systems, 4) systemic thinking, etc. The sociocybernetics is able to take in account the shift in human thinking and technological progress. It provides fragments, which are necessary for complex comprehension of organization and its surroundings (Geyer, 2001).

![Diagram of Cybernetics of I. and II. order](image)

**Figure 1** – Graphical views to differences between cybernetics of I. and II. order (Malinova, 2012)

Figure 1 represents the shift form cybernetics of first order where is in the center of interest system displayed as black box. Observers try to understand system from the outside and describe it. Each of the observers has its own corner of sight. Whereas, the II order cybernetics has the observers in the center. The observers interact with each other and they are surrounded by many systems, which create complex reality. Interactions pass over particular systems, but also between observers who are mutually influenced (Rosický, 2009).

## 3 Problem definition

Nowadays, we are living in a world hit by a global crisis. We call it economic crisis, but in fact it is crisis of our human being. We have technologies but the change of our behaviour is not ready for that kind of technological boom. Our age is sometimes called postmodernism - that is the concept which was taken in account during settling the sociocybernetics principles. Everything is going to change and the change is very quick. Humankind is very adaptive, but is it enough in comparison to the technological progress? For example, we have old-fashioned law systems, processes, the way of
thinking and we are still under pressure due to our biological needs (Rosický, 2009; Capra, 2004).

I believe that for organisations there is a key to solve daily problems which are connected to the very quickly changing environment. The key is sociocybernetics, information management, process optimization and social networking.

4 Methodology

The PhD thesis will have three parts. First part will be theoretical, second part will describe the methodology of doctoral dissertation thesis and the third part will include the practical validation of methodology and conclusions.

In the theoretical part will be set up theoretical background for four groups of knowledge. The final methodology (for strategic management) will contain these main areas: sociocybernetics, information management, social networks and process optimization. Using method of synthesis of knowledge will be refined framework for the methodology.

The thesis methodology will contain setting of hypothesis and metrics. There will be determined research approach and methods.

The practical part will be application of methodology to tourism industry. The whole research will contain three phases. First phase will include a questionnaire survey. On the results from the survey will be selected a group of organizations for second phase. The second phase will be structured interviews with the management of organizations. The third phase will be implementation of finalized methodology for strategic management and evaluation of metrics. (Morgan, 1997; Bhattacherjee, 2012)

5 Preliminary/Expected results

The main goal of doctoral dissertation thesis is to set up methodology for strategic management, which will give managers a guideline how to effectively manage their organisation. The methodology must have clear frontier. It will be focused on one particular industry. The questionnaire will be constructed after synthesis of literature, papers and information available. After querying will be compiled first version of methodology. This methodology will be consulted during structured interviews with management of selected organizations. After interviewing, arises the second version of methodology. The second version will be validated in two organizations. Last version will be created after finalization and comparison of results from organizations.

The new approach should:

- Point out the necessity to work with the social element in organization
- Prepare the processes for quick changes in social elements and also in technological progress
- Be guideline for managers to solve problems in organizations
- Provide guidance how to work with employees to satisfy their needs (Maslow pyramid)
• Also influence topics such as framework for information handling within the organization, knowledge management, feedback, social networks, corporate and personal values

6 Conclusion

The research is in its very beginning. I expect that each part will be clarified in terms of my PhD. studies. The main contribution is new methodology for strategic management. It will be helpful for complex environment, quick changing environment and environment with social elements. The methodology should be a tool for managers how to deal with their employees, information and knowledge, collaboration on social networks, etc. From the practical point of view there is an obvious space for similar methodology. Also from science point of view there is a possible space for incorporation the thesis to sociocybernetic science.

The possibilities for future development are:

1) Highlight the shortcomings of the current management of organizations
2) Define important areas
3) Identify the metrics by which the optimization of business processes will be lead
4) Point to the possibility of the use of instruments which facilitate managing
5) Compile the methodology of the new managerial approach of the modern organization (for effective support of IS/ICT while respecting the social component in the system)

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