Theoretical Insights to Leadership Based on Systems Thinking Principles

The author attempts to summarize theoretically the relevance of the systems thinking principles to leadership. The analysis of theoretical sources was carried out under the principle of synthesised coherence. The methodology of systems thinking is inseparable from the philosophy of systems thinking, thus, the article presents the common theory of systems and the systems approach to the organization. It also includes an integration of theoretical insights. A new leadership conception has been formed, which is based on the systems thinking principles. Originality and value of the new conceptual framework for leadership is integration, which focuses on interactive relations among separate leadership foundations rather than on a separate aspect of leadership. The contents of the leadership foundations may be controlled, developed and supplemented with other results of empirical studies using a conceptual framework for leadership as a basis for development of system thinking.

Keywords: systems thinking principles, leadership, learning organization, interactive design.

Introduction

Management of the organization is an object and space of human creative work. Leadership is closely related to the conception: reflection, expertise and thinking. Thinking includes manipulation of information, formation of concepts and ways of problem-solving, searching for reasons and making decisions. Thinking is a means of every leader in his daily activity, therefore, with a sight to the future it is worth to consider a question whether more efforts should be put into a study of thinking rather than of a substance. One of the ways to improve the quality of results of an activity is to enhance the quality of thinking: how you think, is how you act, is how you are (Haines, 1998).

The recent theories of leadership stress the significance of holism, intuition and creativeness as well as the systems con-
ception of the world, for a successful application of the leader’s potential. The subject of the study is leadership in the context of systems thinking. Systems thinking creates a methodological basis for a new approach to leadership in the organization. Today’s businessmen, managers and leaders need not only skills to act in unstable and unpredictable environment but also to understand the reasons of this.

The purpose of this article is to define the principles of systems thinking theoretical relevance to leadership. This article attempts to answer the question of how might the principles of systems thinking help the leader to achieve higher quality in his activity. The methodology of systems thinking is inseparable from the philosophy of systems thinking. Principles and methods lose their value if they are used separately from a paradigm, therefore, in order to apply the principles of systems thinking in practice it is necessary to realize the common theory of systems and the systems approach to the organization.

The structure of this article is organised under the following principle. Two dimensions are essential in applying the systems thinking principles for leadership:

1. Conceptual level means to understand the essence of systems thinking.
2. Operational level means to become a practitioner of systems thinking.

In order to achieve the formulated aim the following tasks have been set:

- on the conceptual level to compare traditional and systems thinking;
- to provide rich insight of the systems approach to the organization;
- to evaluate the theories of leadership in the context of systems thinking;
- to create conceptual framework for leadership based on the systems thinking principles;
- on the operational level to define the role of the leader as the architect of the organization.

Today the management science faces a dual shift of a paradigm (Gharajedaghi, 2006). Due to the first shift the organisation is perceived as a multiple sociocultural unit, which influences the environment and is influenced by the environment (the systems conception of the organisation). Not only a conception towards the organisation has changed but also an attitude to the method has shifted from analytic thinking (science, which operated independent variables) to systems or holistic thinking (science, which operates interrelated variables).

The second shift, the method one, helps to better understand the intricacy and complexity of reality. The understanding of interrelations requires systems thinking as opposed to analysis thinking. The analytical thinking seeks to simplify complex phenomena while the language of systems thinking is based on the holism principle, i.e. a perception of the world as a whole.

The comparison of traditional thinking and systems thinking

Systems thinking is based on the system philosophy and states that any human activity is open systems affected by the environment. From the classical viewpoint a system is a combination of two or more elements, when every element of the whole influences a behaviour of other elements and the behaviour of each element influences the behaviour of the whole (Vickers, 1970). Any problem must be
solved starting from the whole; one component cannot be affected separately from other components. The essence of systems thinking is the following:
- to see interrelations but not linear cause-effect relations;
- to see processes of changes but not static states.

This conception differs from the way of a reductionistic, analytic or mechanistic thinking. The analytic thinking is the main linear way of a problem solution that bases itself on the principle of cause-effect when a certain reason causes a certain effect. One of the main restrictions of the ability to think systematically is a language. The linguistic structure of the Western European languages “subject – verb – object” programs the linear thinking. The weakness of the analytic thinking is that it cannot cover causal relations and interdependence with the environment and other systems. Analysis and reduction serve well as a micro tool for implementing individual projects but are not suitable as a macro tool for strategic planning. The main tools of a “machine age” were reductionism, analysis and mechanisation, “system age” requires systems thinking and a holistic perception of the world.

According to P. Senge (1990) the practice of systems thinking starts with understanding of the feedback concept. Feedback loops makes systems thinking different from other approaches, this concept states that “reality is made up of circles, but people usually see straight lines, which is a major limitation to see and understand the system and make the right decision related to that system.” (Richardson, 1991; Daum, 2001). A man treats the world as a course of linear events while reality is periodic.

A thorough comparison between the traditional and systems thinking is provided by B. Richmond (1997).

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**EXPECTED OUTCOME**

1. Cut costs by reducing staff
2. Profitability increases

**ACTUAL OUTCOME**

- 4. Internal focus
- 3. Political infighting
- 2. People try to protect departments and jobs
- 5. Declining customer service
- 6. Loss in sales
- 7. Need for more cost cutting

...and so on...

**Fig. 1. Linear and closed loop thinking**

Source: Glass, L., Mackey, M. C. (1996)
Why is it so important to treat the organization as a system in this age of changes? The major organizational problem is actions that do not correspond to the whole. Organizations constantly face these management problems:

A chosen course usually turns aside both due to changes and processes in the environment.

The environment changes so quickly that managers cannot properly evaluate the situation, formulate a comprehensive strategy and implement the chosen strategy when time comes because the key aspects of the environment are already changed.

Simple linear cause-effect models do not work and many actions may influence

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### The systems approach to the organization

The complex systems – organizations, markets, etc – are difficult (sometimes even impossible) to forecast. The environment in organizations is becoming more complex and changes more often and suddenly (Tvede, 1997, Stacey, 1993, Tetenbaum, 1998). The new realities of social life cover:

- The complexity and indefiniteness of the social environment;
- Fragmentation and specialization of knowledge;
- Aims that conflict with each other;
- A multiple process of decision making.

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### Table 1

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<thead>
<tr>
<th>Systems Thinking Skill</th>
<th>Traditional Thinking Skills</th>
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<tbody>
<tr>
<td>• Dynamic Thinking</td>
<td>• Static Thinking</td>
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<tr>
<td>Framing a problem in terms of a pattern of behaviour over time</td>
<td>Focusing on particular events</td>
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<td>• System-as-Cause Thinking</td>
<td>• System-as-Effect Thinking</td>
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<tr>
<td>Placing responsibility for a behaviour on internal actors who manage the policies and plumbing of the system</td>
<td>Viewing behaviour generated by a system as driven by external forces</td>
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<td>• Forest Thinking</td>
<td>• Tree-by-Tree Thinking</td>
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<td>Believing that, to know something, one must understand the context of relationships</td>
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<td>• Operational Thinking</td>
<td>• Factors Thinking</td>
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<tr>
<td>Concentrating on getting at causality and understanding how a behaviour is actually generated</td>
<td>Listing factors that influence or are correlated with some result</td>
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<tr>
<td>• Closed-Loop Thinking</td>
<td>• Measurement Thinking</td>
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<tr>
<td>Viewing causality as an ongoing process with the “effect” feeding back to influence the causes, and the causes affecting one another</td>
<td>Searching for perfectly measured data</td>
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<td>• Quantitative Thinking</td>
<td>• Proving-Truth Thinking</td>
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<tr>
<td>Accepting that one can always quantify, but not always measure</td>
<td>Seeking to prove models to be true by validating with historical data</td>
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<tr>
<td>• Scientific Thinking</td>
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<tr>
<td>Recognizing that all models are working hypotheses that always have limited applicability</td>
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unexpected (either positive or negative) effects.

To become a practitioner of systems thinking means to start treating problems in the organization as the problems of the system and start looking for system-integrated solutions. In this case there is a possibility to apply various management methods, means and techniques in order to:

- directly affect the system in a communicative way;
- bring new knowledge into the system and change the structure of system relations;
- change circumstances of an activity performance;
- apply complex and combinatorial effects (Kvedaravičius, 2006).

“An effective management orients to a structure-determined behaviour and events rather than mechanically reacting to past events. The structure determines the behaviour that determines events” (Forrester, 1975). The structure of business system determines the effectiveness of its activity, a control of the system requires understanding that system.


**Leader as an architect of the organization**

The systems approach to the organization conceptually changes the meaning of leadership. Theorists of systems thinking in organizations stress a new role of the leader as an architect, constructor or business designer in the organization (Vicere, Fulmer, 1998, Wall, 2005). M. F. Kets De Vries (1999) claims that the leader performs two roles in the organization: charismatic and architectural. An efficient work requires both roles. When a charismatic leader inspires his followers to seek a vision, a leader-architect plans the whole politics, strategy and structure of the organization. This role is not so noticeable but is none the less significant.

“A manager needs multisystematic insight... a position of a manager-metatheorist or methodologist, only then a managed system can be consciously restructured by transforming the old order to the new one” (Kvedaravičius, 2006). P. Senge (2007) also accentuates the leader’s role as a constructor of the organization. S. G. Haines (1998) mentions the interactive management model and call systems thinking a platform for designing business architecture. “Every organization is ideally created to achieve certain results. If results are worse than ex-
pected then the design must be changed. This means changing structures, operational processes, information flow, interrelations in a way to meet the new needs” (Gharajedaghi, 2006).

J. W. Forrester (2003) emphasizes “a fundamental difference between an enterprise operator and an enterprise designer...one is the airplane designer and the other is the airplane pilot. The designer creates an airplane that the ordinary pilot can fly successfully. Management education has tended to train operators of corporations, but...in the future will successful corporations rely on enterprise designers”.


Relying on the system approach to leadership S. G. Haines (1998) accentuates six competencies areas that are essential to leadership: enhancing Self-Mastery, building Interpersonal Relationships, facilitating Empowered Team, collaborating Across Functions, integrating Organizational Outcomes, creating Strategic Alliances (“Centering Your Leadership” Model). The Haines model is a new instrument for leadership development based on the system thinking concept. “Thinking of leadership development as a system, instead of just providing training programs, is an entirely new way of thinking [...]. When we boil competitive edges to their essence, leaders are the only true sustainable edge over the long term” (Haines, 1998).

J. Gharajedhagi (2006) gave a new philosophical sense to leadership in the modern context by proposing an interactive management model and describing systems thinking as “a platform for designing business architecture”. “The best way to understand the system is to construct it, to get a handle on emergent properties, [...]. We need to understand the processes that produce them, [...]. Controlling, influencing, and appreciating the parameters affecting the system's existence” (Gharajedaghi, 2006).

Architecture is produced by large numbers of people working together to achieve a vision of the architect. Architecture is by definition a social rather than a solitary activity (Hood, Jones, 1996, Reinertsen, 1997). From physical architecture, can be learned that four factors are essential to the creation of effective design (Nadler, Gerstein, Shaw, 1992):

- the primacy of purpose - the principle of “form follows function”;
- “architectural style” capable to fulfill the vision of the architect, the requirements of the situation, and the needs of the people living in it;
- the use of structural materials capable to implement the architecture;
- availability of the necessary collateral technologies.

The architect of the organization uses the same principles. Figure 2 shows a new role of the leader and how it may be successfully implemented through certain systems thinking principles in the organization.

Interactive design such as redesigning the future and inventing ways to bring it about, the interaction of structure’s functions and processes, when combined with operational thinking and understanding of the implications of self-organizing behavior, “create a competent and exiting methodology that goes in dealing with
challenges of seemingly complex and chaotic social systems” (Gharajedaghi, 2006). Success comes from a self-renewing capability to spontaneously create structures and functions that fit this moment (Barnett, 1997). The ability to continuously match the portfolio of internal competencies with the portfolio of emerging market opportunities is a foundation of a concept of new business architecture. Create new formulas of success and do not wait until these formulas are broken.

Evaluation and generalisation of theories that link leadership and systems thinking

“If we know one thing today, [ ]... it is most managers are made, not born...there has to be systematic work on the supply, the development, and the skills of tomorrow’s management” (Drucker, 2004). Literature linking leadership and systems thinking is thematically widely developed but usually limits itself to a pragmatic or a model level. Many authors emphasize the importance and relevance of systems thinking in leadership, however, theories are difficult to be summarized, since they are based on different attitudes to both systems thinking and leadership. Although the attitudes of the authors of systems thinking are conceptually similar, they are difficult to compare because there is no unanimous methodological basis for comparing these attitudes. Different authors emphasize the importance of different factors to leadership, highlight different aspects, and use different terms for defining the role of the leader (“architect”, “designer”, “methodologist”, “constructor”).

An abundance of the systems thinking theories and attitudes and a variety of terms makes it difficult to understand the very systems thinking. It should be noted that the systems thinking theories are widely spread but they are not universally known and applied in man-
agement, since they require a deeper understanding of systems philosophy. How is it possible to learn to think systematically? G. Ossimitz (1998) answers this question and states that one needs to start from “Awareness of Systems” – a conscious perception and philosophy of systems. “Learning the systems methodology is very much like learning to play chess. The rules are relatively simple, but proficiency comes only with practice” (Gharajedaghi, 2006).

Another important aspect lies in the fact that the majority of management theories emphasise the inspirational role of leadership, while the theories of systems thinking focus on the instrumental aspect of leadership, and, as it was mentioned before, since the essence of leadership reveals itself through the interaction of these two dimensions it is worth while trying to integrate these two aspects when defining the process of leadership as a system.

Another gap in literature is that there are no methods and means proposed to evaluate, measure and develop systems thinking. There are not many empirical studies of systems thinking while “theoretical and didactic reflections to develop systems thinking are on the whole difficult to find” (Ossmitz, 1998). The theories of post-modernistic leadership are dominated by two trends of attitudes:

1. Integrating, which combines different leadership theories and attitudes, for instance L. Stout’s (2003) interdisciplinary leadership model IDEAL, which unites sociological, psychological and philosophical aspects of the leadership (including integrating models of McGill & Slocun or Yammarino & Dansereau).

2. Differentiating, which emphasizes different leadership dimensions, orientations and levels, for example, a multidimensional leadership model by F. Dansereau and F. Yammarino (1998), which points out the levels of a person, a dyad, a group and a collective (as well as Csikszentmihalyi, 2003 and others).

This work focuses on the first trend, integrating one, and seeks to design the integrating interdisciplinary model by summarizing the theories by R. L. Ackoff (1999), S. G. Haines (1998), P. Senge (1990, 2007), J. Gharajedaghi (2006) and other authors. The contribution of this article is to summarise theoretically the systems thinking principles, which are relevant to leadership and to design an integrating conceptual framework, integrating inspirational and instrumental aspects of leadership, which would become a methodological basis for further empirical studies, for example, to analyse the leader’s ability to think and act systematically, to search for links between a systemic mode of the leader’s thinking and the results of the organisation’s activity, or when studying how systems thinking may be developed while designing programs for leadership development.

Linked with research methodology the conceptual framework could be checked and developed, and the content of the leadership foundations should be filled with the findings of empirical studies. Also trying to apply systems thinking to practice it is important not just understand what systems thinking means but also to know what resources and skills leaders need. One of the reasons why it is difficult to apply systems thinking effectively according to B. Richmond is “that the thinking skills needed to do so are many in number and stand in stark contrast to the skill set that most of us currently use when we grapple with business issues.” (Richmond, 1997).
Conceptual framework for leadership based on systems thinking principles

The designing of a conceptual framework is first based on S. G. Haines’s (1998) attitude towards leadership as a system process and this attitude provides possibilities to apply the properties of an open system to leadership. As a methodological basis for identifying the main leadership foundations, a mature and, in my mind, the most reasonable J. Gharaedjaghi’s (2006) conception of systems thinking, which dates back to the times of Aristotle (paralleling to Aristotle “good life” conception and discussion of health, vitality, and vigour under the heading of wealth) and points up dimensions of social systems, was chosen: the generation and distribution of wealth; the generation and dissemination of truth and of beauty; formation and institutionalization of values; development and duplication of power.

Five dimensions faced by all human societies: ethics, aesthetics, scientifics, politics, economics: values (tradition) is an ethical–moral function, beauty (charisma) – an aesthetic function, the pursuit of truth (or “knowledge”) – a scientific function, power - the questions of legitimacy, authority and responsibility – a politic function. Ideal –seeking systems (Ackoff, 1999) move toward ideal, economical function is very important for progress - „wealth, production of necessary goods and services and their distribution”(Gharaedjaghi, 2006), „plenty”, „goods”(Ackoff, 1999).

As it has already been mentioned, a systems thinking concept is inseparable from the systems thinking principles, it is based on these principles and realized through them at operational level, thus, a semantic field of the leadership foundations is expanded by relevance of the systems thinking principles to leadership: purposefulness, operational thinking, holistic thinking, interdependency, interactive design, based on the theories by P. Senge (2007), S. G. Haines (1998), D. Zohar, I. Marshall (2004) and others. In this way, aspects of both the inspirational (through vision, values, power, knowledge) at a conceptual level, and the instrumental leadership (through systems thinking principles) at an operational level have been referred to.

The four foundations of leadership are very much interdependent and value driven. They define critical attributes of leadership. Dimensions cannot be analyzed separately, it is necessary to emphasize their interactions, for example each dimension can be a source of power etc. The newly designed conceptual framework for leadership is in its essence descriptive, prescriptive and predictive, that is, it indicates dimensions of the leader as the organization’s architect and explains why a particular leadership case works and where to look for reasons of failure, indicates how leadership can be improved, developed and assesses the potential of the leadership.

Therefore we should look at this concept as into the way of thinking not just as a discipline or a problem solving methodology. Systems thinking is not a panacea. The application of the systems thinking principles cannot guarantee success but may be a useful means or a permanent form of activity when solving conceptual problems.

The “beauty” of leadership or “charisma” of the leader (as called by J. Gharaedjaghi) is discovered through Shared Vision foundation, which is based on the principles of Holistic Thinking and Purposefulness.
Current leadership literature frequently characterizes the leader as the vision holder, the keeper of the dream, or the person who has a vision of the organization’s purpose. M. Depree (2004) asserts that “the first responsibility of a leader is to define reality”. Vision is defined as “the force which molds meaning for the people of an organization”. A leader’s vision needs to be shared by those who will be involved in the realization of the vision. An important aspect of vision is the notion of “shared vision.” (Mintzberg, 2001).

Perception of the principle of purposefulness adds another aspect of meaning to the leadership. As a purposeful system, an organization is part of a larger purposeful whole, the society; at times, it has purposeful individuals as its own members. The task of the leader is “to align the interest of purposeful members and generate excitement and commitment to the purpose of the whole and vice versa” (Gharaedjaghi, 2006), to serve the purposes of organization members while serving the purposes of its containing whole. Members join an organization to serve themselves, unless the organization serves them, they will not serve it well. For social organization the problem of integration is a constant struggle and continuous process.

Systems thinking embodies a certain world-view, the basis of which is a conception of interrelations in the system. Only understanding of interaction of separate organizational parts helps to solve problems (Seel, 1991, Spruill, Kenney, Kaplan, 2003). The leader can efficiently combine activity in separate departments, processes, teams and individuals when he understands the principles of the organization as a system. If the leader is not able to see the whole (“big picture”) of the organization, he focuses on events and behaviour in a workplace and not to the common problems of the system or structure, which should be solved first (Vester, 1999).

**Knowledge foundation** manifests itself through the **principles of holistic thinking** and **operational thinking**. The holistic principle in this context first of all means a structure, a function, a process and a perception of the context (Ackoff, 1999). Holistic thinking aim to alter thinking in a way to see the whole and helps to recognize a structure of complex phenomena. Such thinking leads to ability to actively influence events and form the surrounding environment rather than mechanically react to environmental changes.

According to the P. Senge, the main argument why we need knowledge to use systems thinking is that we are becoming overwhelmed by complexity. It means that one of the purposes of systems thinking is by simplifying the reality to show overall picture. “Systems thinking is a discipline for seeing the “structure” that underlie complex situations, and for discerning high from low leverage change” (Senge, 1990). So firstly what should be done is to restructure the thinking. And the way to do that is to see interrelationships rather that linear cause-effect chains and to see processes of change rather than static picture (Senge, 1990).

Knowing the systems nature and needs of the organization the leader can order priorities and concentrate his attention to the main strategic tasks and resources – a “helicopter view”. The leader’s task is to encourage development of the system rather than balancing it, to seek for results allowing to achieve still better results, not to work harder but more efficiently (Forrester, 1975).

**Operational thinking** refers to the conception of the principles of the system
dynamics, that is, evaluation of the feedback loop to the system, identification of the delay effect and barriers of growth, understanding stocks vs. flows, delays, oscillations, thinking in models, awareness of systems (Funke, 1986; Mandinach, 1989; Mass, Berkson, 1995; Ossimitz, 1998; Funke, 1986). The conception of these principles creates an additional value in the leadership: business systems are seen as interdependent, reasons are searched both inside and outside the organization, and the fact that an effect in one place of the system may cause an effect in another place causes neither fear nor surprise.

One more important aspect of the operational thinking and is the ability to foresee and modelling. Systems thinking is a means for forecasting, various future versions may be foreseen with additional variables. Modelling refers to activity when an equivalent is found for a particular object. When forecasters manage to appropriately select the model, image, equivalent for the real system according to its structure and behaviour, forecasts are quite accurate. On analyzing a model the forecaster can get more information than he expects. Forecasting activity is necessary to know what can happen inside and outside the organization. The planning process is related to aims and means for achieving that aim, and modelling allows to understand better the dynamics of processes.

“Efficient management can be achieved only when one has an ideal and both optimistic and pessimistic forecasts of future states. One needs to imagine a new trajectory towards the ideal and compare it with a natural trajectory” (Kvedaravičius, 2006). The efficient management of the organization is achieved only when management is oriented to the future and not to the past mistakes, in this case the leader must manage to see the future view. It is impossible to foresee everything, but it is possible to evaluate possibilities of unexpected circumstances (Ringland, 1998).

The concept of the feedback loop confronts with the ethical problem (ethical-moral function of values foundation) of responsibility as well. The linear view of the world easily solves the problem of responsibility – either others or I am guilty. The concept of systems thinking states that every system unit is responsible for the problems caused by the system. However, this does not mean that every system participant has equal opportunities in influencing changes in the system. The concept of the feedback loop encourages learning and changes. „Knowledge means to separate control from service and convert it to a learning function” (Gharaedjaghi, 2006).

Since the very origination, the concept of the leadership has been related to moral values. A definition of transformational leadership by Burns (1978) treats leadership as an ethical act. M. Csikszentmihalyi (2003), by using the term “value based leadership”, describes business leaders as persons, who unite high achievements with strict moral commitments.

Spiritual leadership theories (Zohar, Marshall, 2004) focuses on the fundamental importance of values through the concepts of ethics, trust, vision and spirituality for personal and organizational growth.

In the context of systems thinking the values foundation is related with the principle of interdependency. The effectiveness of an organization, as a voluntary association of purposeful members, depends on the degree of their commitment and sense of belonging. Emotions are much more potent than reason in organization. Morality is mainly about how people relate to and deal with others, but it also includes how
leader interact with himself, the respect with which leader engage himself.

When creating a system the leader is made to work with himself, he must create hypotheses and search for his place in the system. Technical aspects are combined with the aspects of behaviour, personal („personal mastery” and „mental models”) with conceptual ones. The learning process can start at both the peak and the central link. Systems thinking provides a conceptual basis for the learning organization and an opportunity to understand how people understand themselves and the surrounding world, broadens the thinking area and develops the openness of mind which leads to an opportunity to use the freedom of experimenting. Basically there can be neither correct nor incorrect solutions in this creative process because the original world seeing enables us to make original decisions.

Interdependency embodies an operational way of the system. The basis of every success full system is a successful communication among separate parts. One of the first symptoms indicating difficulties in the organization is an interference of the communicative system. The success of an organization depends not so much on managing the actions of individuals, but on managing the interactions among its members. The interaction among members can take many forms, members may cooperate, compete over others or be in conflict with respect to different sets at the same time. If leader is to serve their members as well as their environments, he must be able to deal with conflict. Creating a conflict free organization may not be possible, but creating one capable of dealing with conflict is (self management teams).

Power (realized through an interactive design and holistic thinking principles).

For J. Gharaedjaghi (2006) power is more „freedom and ability to choose”, for R. L. Ackoff (1999) is a matter of power-to-do (as distinct from power over, which is about dominance) and the emergent property of the whole. To deal effectively with systems requires understanding choice, and choice is matter of freedom and power-to-do. Because of the causal determinism in classical physics, many people think that there is no freedom of choice, or free will. In the quantum world, on the other hand, there exist many possibilities. The possibility of a new context arises when people choose. The leader is able to jump out of his old context into a new one when he chooses, which makes him free in his choice. In attaining freedom in actions, „it is important to avoid being dominated either by ego/personal conditioning or by tyrannical, internal, repressed personal unconsciousness – consciousness without awareness” (Goswami, 1993).

The power represent the dilemma: a dichotomy of centralization (a concern for the interest of the whole) or decentralization (a concern for the interest of the parts). J. Gharaedjaghi proposes the following option: power can be duplicated, centralization and decentralization can happen in the same time by „sharing of decision criteria”, that results in empowerment. „Achieving a higher order of decentralized decisions making requires a higher order of centralized agreement on decision criteria. The power of leadership is in creation of a network of „learning and design cells” (an organisation designed on the hologram principle, i.e. „learning organization” (Senge, 1990).

Interactive design is essentially identified with R. L. Ackoff. It is the core of his famous purposeful system methodology. To distinct outputs of interactive design
are defining problems (Formulation the Mess) and designing solutions (Idealization). Neither problems nor solutions can be entertained free of the context. Interactivism is a design of the desirable future and a search for its implementation ways. Interactivists, as opposed to those acting reactively or proactively, mainly pay attention to the problem, its formulation and the search for a solution.

In order to effectively solve the problem the leader doesn't only analyze the particular situation comparing it with others, employing various scientific knowledge, systematic logics, etc, but also identifies the uniqueness of this situation, tries to define what is known and what is unknown and what knowledge he lacks, tries to adapt the situation to the changing environment and stimulates its development to achieve better results. As it was mentioned above, the main attention is paid to properly name the problem (formulation of mess) and identify the leverage point.

Interactive design means a necessity of a constant critical assessment. S. Finkelstein (2004) analyzed the most usual mistakes of business leaders and named an inadequate and incorrect assessment of reality as one of the reasons leading to failure. In many cases unsuccessful leaders ignored signals of danger from the environment and blindly believed in the correctness of their vision. Overestimating their abilities to evaluate the environment these leaders refused to change the taken course in spite of a range of apparent evidence of chances of failure to the organization.

Conclusions

1. Traditional or analytic thinking is a linear way of problem solution based on the principle of cause and effect. The main idea of systems thinking is based on the fact that reality is made up of circles, but people usually see straight lines, which is a major limitation to see and understand the system and make the right decision related to that system. The analytic thinking aims to simplify the complex phenomena while systems thinking is based on the holism principle – a concept of the world as a whole.

2. As the organization is a complicated “open system” it is necessary to consider the environmental influence to the system and the system's influence on the environment while planning changes, making decisions and solving problems inside the organization. Modern businessmen and leaders need not only to learn acting in unstable and unpredictable environment but also to understand why this happens. The systems thinking principles can become valuable principles of the leader’s activity and systems thinking an innovative means of the leader’s activity. The original seeing of the world creates preconditions for original decisions.

The systems approach towards the organization conceptually changes the leader's role in the organization, that is, the leader becomes the organization's architect. The best way to understand a system is to design it. In order to design the organization as a whole according to certain principles one needs to understand minor details and the principles of the system activity, to find the main ideas – aims, tasks, values, to foresee the common concept. Every organisation is ideally created to achieve certain results. If results are worse than expected, the organization's design has to be changed. This means changing of structures, working processes, information flows and interrelations in a way
to satisfy the new needs. Success comes from a self-renewing capability to spontaneously create structures and functions that fit this moment.

3. When trying to apply systems thinking in practice it is important, not just to understand what systems thinking means, but also to know what resources and skills leaders need. Integral conceptual framework for leadership theoretically summarizes theories linking leadership and systems thinking thus creating a methodological basis for further empirical research. The four foundations of leadership (shared vision, values, knowledge, power) are very much interdependent and value driven. They define critical attributes of leadership. Dimensions cannot be analyzed separately, it is necessary to emphasize their interactions.

4. The semantic field of leadership foundations is enlarged by systems thinking principles relevant to leadership, and in this way both the inspirational aspect of leadership (per vision, values, power, knowledge) at the conceptual level and the instrumental aspect of leadership (per systems thinking principles) at the operational level are covered. The new role of the leader as the organization architect can be successfully implemented through certain systems thinking principles: holistic thinking, operational thinking, interdependency, interactive design and purposefulness.

5. The new conceptual framework for leadership is descriptive, prescriptive and predictive, that is, it explains why a particular leadership case works and where to look for reasons of failure, indicates how the leadership can be improved, developed and assesses the potential of the leadership. To become a practitioner of systems thinking means to start looking at organizational problems as the system problems and to look for the solutions integrated into the system. A focus on individual events and actions sidetracks attention from the common view of the organization as the system. Specialization, lack of time, inability to develop a holistic perspective and traditional ways of thinking are reasons of this fragmentation.

6. The application of the systems thinking principles cannot guarantee success but may be a useful means or a permanent form of activity when solving conceptual problems. Therefore we should look at this concept as to the way of thinking, but not just as a discipline or a problem solving methodology. Leadership is closely related to the conception: reflection, expertise and thinking. Thinking includes manipulation of information, formation of concepts and ways of problem-solving, searching for reasons and making decisions. Thinking is a means of every leader in his daily activity, therefore, with a sight to the future it is worth to consider a question whether more efforts should be put to a study of thinking rather than of a substance. One of the ways to improve the quality of activity results is to improve the quality of thinking.

References

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Šiame straipsnyje bandoma teoriškai apibendrinti lyderystės aktualus sisteminio mąstymo principus. Teorinių šaltinių analizė atlikta sintezuotos koherencijos principo. Sisteminio mąstymo metodologija negali būti atskirta nuo sisteminio mąstymo filosofijos, priemonės ir metodų tinklo vertės, jei jie naudojami izoliuotai nuo paradigma, todėl pirmojo straipsnio dalyje pristatoma bendroji sistemų teorija ir sisteminis požiūris į organizaciją. Antroje dalyje buvo apibendrinti teoriniai šaltiniai ir suformuota nauja sisteminio mąstymo principais besiremiant lyderystės koncepcija, kuri savo esme yra aprašanti (angl. descriptive), nurodanti (angl. prescriptive) ir prognozuojanti (angl. predictive).

Naujos teorinės koncepcijos originalumas ir privalumai – integracija, pabrėžianti ne kurią nors vieną lyderystės dimensiją, o lyderystės dimensijų tarpusavio sąveiką. Keturios dimensijos (vizija, vertės, žinios ir galia) apibrėžia kritinius lyderystės faktorius, jos negali būti analizuojamos atskirai, nes sukūrią vertę tarpusavio sinergiją. Semantinis lyderystės dimensijų laukas buvo užpildytas sisteminio mąstymo principais (holistinio ir dinaminio mąstymo, tarpusavio priklausomybės, tikslinumo ir interaktyvumo principais), tokiu būdu paliečiant tiek inspiracinių lyderystės aspektų (per dimensijas), tiek instrumentinių (per sisteminio mąstymo principus).

Lyderystės dimensijų turinys gali būti tikrina mas, tobulinamas ir užpildomas tolesnių empirinių rezultatų. Per lyderystės dimensijas atskleidžia naujas lyderio kaip organizacijos konstruktorius vaisdina, todėl teorinių lyderystės dimensijų rėmai gali būti naudojami kaip išankis lyderio savanalizei ir savęs ugdymui, kai gaires kuriandavu mokymosi ir tobulinimo programas, kaip priemonė vykdant vadovų atranką.

Sisteminis mąstymas nėra panacėja. Sisteminio mąstymo principų naudojimas negali užtikrinti sėkmės, bet gali būti tapti kasdieninė praktika, veiklos forma ir tikrovės vertinimo koncepcija, naudinga priemonė ar nuolatine inovatyviai veiklos forma sprendžiant konceptualaus pobūdžio problemas. Sisteminio mąstymo principų naudojamas gali tapti kiekvieno lyderio kasdienybė.