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A HOLISTIC INSTRUMENTARIUM FOR CREATIVE MANAGING THE PROBLEM SITUATIONS*

Abstract

Management problem situations, in view of their great complexity, dynamism, interactivity and ambiguity, should be observed and explored as the complex, multi-faceted manageable systems of problems. Creative managing the holistically reconceptualized problems in organizations implies an appropriate, scientifically based and practically useful instrumentarium - a paradigmatic framework within which problem areas important to the enterprises survival and development can be conceptually articulated, systems methodologies for structuring problem situations, and systems metaphors to encompass and express the different perceptions and interpretations of the considered systems of management problems. With the support of critical systems thinking, that is committed to critical awareness, improvement and pluralism, appropriate use of this holistic instrumentarium enables theoretically and methodologically based, practically effective and socially responsible changes to determine; through these changes implementation, the enterprise functioning should be enhanced purposefully.

Key words: Complex and Ambiguous Problems in Organizations, Creative Holistic Approach to Management, Systems Methodologies, Systems Metaphors, Paradigms for Dealing with the Problem Situations

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HOLISTIČKI INSTRUMENTARIJUM KREATIVNOG UPRAVLjANjA PROBLEMSKIM SITUACIJAMA

Apstrakt

Upravljačke problemske situacije, s obzirom na njihovu ekstremnu složenost, dinamičnost, interaktivnost i višeznačnost, trebale bi biti posmatrane i istraživane kao kompleksni, višedimenzionalni, upravljivi sistemi problema. Kreativno upravljanje holistički rekonceptualizovanim problemima u organizacijama implicira odgovarajući, naučno utemeljen i praktično koristan instrumentarijum - paradigmatski okvir u kome problemska područja bitna za opstanak i razvoj preduzeća mogu biti konceptualno artikulisana, sistemske metodologije strukturiranja relevantnih problemskih situacija u preduzećima, i sistemske metafore za obuhvatanje i iskazivanje različitih percepcija i interpretacija istraživanih sistema upravljačkih problema. Uz podršku kritičkog sistemskog mišljenja, obavezanog na kritičku svesnost, unapređivanje i pluralizam, primereno korišćenje dotičnog holističkog instrumentarijuma omogućava opredeljivanje teorijsko-metodološki utemeljenih, praktično delotvornih i društveno odgovornih promena, čijom bi implementacijom, funkcionisanje preduzeća trebalo biti svrhovito unapređeno.

Ključne reči: kompleksni i višeznačni problemi u organizacijama, kreativni holistički pristup menadžmentu, sistemske metodologije, sistemske metafore, paradigme bavljenja problemskim situacijama

INTRODUCTION

In contemporary circumstances, management problems in enterprises represent, as a rule, the complex results of simultaneous influences of numerous and various economic, organizational, technical, technological, psychological, sociological, cultural, political determinants. They therefore should be observed and explored as the appropriate *problem situations*. Actually, it is about the complex, dynamic, interactive, ambiguous manageable systems of problems (Petrović, 2010, p. 275).

A creative managing the complex and multidimensional organizational problems - which are holistically reconceptualized - implies a corresponding scientific instrumentarium.

First of all, a conceived dealing with the problem situations in enterprises requires their appropriate structuring. That is, it is necessary to employ the *systems methodologies* for identifying and holistic exploring: a) the all essential sub-problems of the considered problem area in an enterprise, b) the key relationships between these sub-problems and c) the complex relations among the respective problem area and its relevant environment.

Then, a purposeful managing the problem situations implies an uncovering, expressing in the close categories, and comprehensive reviewing the mutually different perceptions and interpretations of the relevant aspects of the enterprise's problem area, through using the suitable *systems metaphors*.

At the same time, a thought-out addressing the problem situations in organizations is always relied on an appropriate accepted philosophical, i.e. theoretical-methodological framework. It is about the *paradigms* which ensure to determine a valid problem and what - within the respective accepted conceptual framework - should represent a scientifically grounded and practically useful solution to that problem.

Accordingly, the key hypothesis is that managing the problem situations in organizations can be improved *creatively* through developing and employing the appropriate *holistic* instrumentarium that encompasses:

- the systems methodologies for structuring the systems of complex management problems,
- the systems metaphors for conceptualizing and uncovering the relevant perspectives of observing and exploring the problem situations, and
- the appropriately developed paradigms that provide the different conceptual frameworks for dealing with the problem situations.

The scientific method that has been used in the research process is the contemporary *critical systems thinking* which is committed to: a) critical awareness of the strengths and weaknesses of each of these instruments for tackling the problem situations, b) improvement of management process of the complex and multifaceted problems in organizations, and c) pluralism - to respect the different perceptions and interpretations of the problem situations in enterprises and allow the combined use of selected research instruments (Jackson, 2000, pp. 375-377; Jackson, 2003, pp. 303-304; Petrovic, 2012b, pp. 797-814).

THE SYSTEMS METHODOLOGIES

An effective and efficient dealing with the management problem situations in enterprises, that have been determined as the complex, amendable in time, ambiguous, manageable systems of the problems, implies their *structuring* by employing the appropriate systems *methodologies*, rather than striving to find the solutions to their particular, isolated problems by using certain methods and techniques. Compared to the methods and techniques for problem solving, the systems methodologies represent the complex instruments of a higher order - so called the *meta-methods*. The systems methodologies, actually, give the guidelines for a creative tackling the concerned problem area in the enterprise through:

- identifying and exploring its relevant sub-problems,
- uncovering and researching into their important relationships, and
- singling out and reviewing the key interactions between the concerned problem area and its environment, i.e. the other problem situations which are significant, but they cannot be managed.

As an essential methodological instrument for structuring the management problem situations, the systems methodologies rely on the appropriate philosophical - ontological, epistemological, and axiological - assumptions. Thanks to their own philosophical foundations, the systems methodologies can encompass, bring into connection, and make available the different perspectives, i.e. perceptions and interpretations of the concerned problem domain in the organization. In this manner, a necessary basis for facilitating the relevant stakeholders' negotiation and eventual generating a consensus on their joint action in the explored management problem domain in the organization can be created.

In fact, the result of structuring the problem situations by employing the appropriate systems methodologies is a well-defined project (Rosenhead, 1994, p. 112), which can be a subject to further processing by using the corresponding instruments, for example, the tools of the traditional Operational Research (OR). In other words, it is about such a clarification of the considered problem situation, that enables those who have responsibility to reach a compromise on a course of action. As a radical response to the requirements for creative tackling the problem situations, the systems methodologies are useful and should be employed when they (Rosenhead, 1994, p. 116):

- align the multiple alternative perspectives,
- facilitate the participants' negotiation on common priorities,
- operate through the interactions and iterations,
- generate the valid formulations of the problems and activities' implications.

Although mutually different, the systems methodologies, as holistic instruments for managing the real-world problems of business economics, are characterized by certain common relevant properties (Eden & Ackerman, 2006, pp. 766-768). First of all, the systems methodologies do not use the models as the instruments for finding the optimal solution to the considered problem; rather, they employ the models as the appropriate, transitional objects with the aim of facilitating the negotiation and reaching - through discussion - an agreement between the explored problem situation's stakeholders. Then, the systems methodologies do not deal with reducing the complexity of the problem situations in organizations; on the contrary, striving to increase the overall productivity of group processes, the systems methodologies derive the complexity from the existence of the multiple perspectives of the considered real-world problem.

Also, the systems methodologies are focused on facilitating the construction of the effective models and group processes.

Pursuant to these important common features of the systems methodologies, it can be stated that their effective employment implies the following recognitions:

- the problem situations belong to the multiple stakeholders;
- the methodologies have to be made more transparent to their users;
- since a more successful structuring the management problem situations and facilitating the stakeholders' negotiation on their joint action require an appropriate transdisciplinarity, as a result, the methodologies become more complex;
- i.e., not only the particular different - economic, organizational, sociological, psychological, political, technical, technological, cultural etc - dimensions of the considered problems system, but also the relationships between them have to be included into the research.

Evaluation of the systems methodologies for structuring the management problem situations from the standpoint of their practicality, i.e. from the viewpoint of their appropriateness to the considered problem area in the organization, has to be grounded theoretically (White, 2006, pp. 842-855). The suitable setting for an effective learning about the methodologies' use in structuring the problem situations in organizations can be built (Keys, 2006, pp. 822-829), taking into account the most diverse insights and knowledge which are available to the systems methodologies' users, and which are used by them.

The systems methodologies are based on the different philosophical - ontological, epistemological, axiological - assumptions; as a result, they belong to the different paradigms - the functionalist, interpretive, emancipatory, postmodernist paradigm (Jackson, 2000; Jackson, 2003; Jackson, 2006a, pp. 872-874). Thereby, the systems methodologies should not be understood as competitive, opposing each other within the same research area, but rather as the appropriate alternative approaches to management, which can be suitable for the different contexts' types of the management problem situations that are being explored and where one wants to intervene purposefully. In other words, each theoretical-methodological approach within Management Science (MS) can be useful in the particular areas, and should be employed in such circumstances in which it is the most effective. Additionally, an evaluation of each systems methodology ought to be focused on the assessment of its success in structuring the problem situations, i.e. in solving the problems in the respective established circumstances.

Accordingly, the following *question* is vitally important: What type of the problem situation in the enterprise can be managed validly by

means of what type of the systems methodology? In other words, what systems methodology is the most appropriate to the considered management problem situation in the organization?

Based on the different perceptions of the reality, the systems methodologies can be systematized taking into account their assumptions about the problem situations, i.e. about the problem contexts, in the categories of complexity and participants' relationships. In fact, the relevant features of the problems in organizations - their complexity and ambiguity - can be encompassed validly, represented, and explored through determining the two key dimensions - the systems dimension and the participants dimension, and the resulting basic types of the management problems' contexts (Jackson, 2000; Jackson, 2003; Jackson, 2006a, pp. 868-878).

The *systems* dimension refers to the relative complexity of the management problem situation, expressed in the systems' categories. Generally, at the ends of a continuum of the systems' types, there are relatively simple systems, i.e. complex systems as the appropriate representations of the relatively simple problems, i.e. the complex problems in organizations. The *participants* dimension encompasses the unitary, pluralist, and coercive relationships between the individuals and the groups who are interested in the considered problem situation and who are dealt with it. The immediate resultant of combining the systems dimension - relatively simple and complex - and the participants dimension - unitary, pluralist and coercive - is the corresponding six-cell matrix of the basic ideally[1] typical *contexts* of the management problems in organizations: relatively simple - unitary, relatively simple - pluralist, relatively simple - coercive, complex - unitary, complex - pluralist, complex - coercive.

Like any other problem situation in organizations, the problem situation of managing the enterprise growth and development is precisely determined by the systems dimension and the participants' relationships dimension. In relation to the complexity, i.e. the systems dimension, this problem situation is validly encompassed and represented by the appropriate complex, dynamic, interactive systems in the different relevant areas - on the market, in the techniques and technologies, in manufacturing, in the human resources, finance etc. In relation to the participants dimension, this problem situation is determined by the pluralist relationships between the participants because a basic compatibility of the relevant

[1] In general, the *ideal types* (Weber 1949) can be determined as the appropriate logical aids, i.e. as the logical perfections that, in fact, represent the suitable tools of a methodology for scientific research. It is about the theoretical constructions that do not exist in the reality but in the research processes they serve the empirical data in order to determine how much the explored part of the reality is near, i.e. far from the concerned ideal type.

stakeholders' interests (buyers, consumers, customers, employees, owners, suppliers, competitors, financial institutions, local and state political structures etc) has to exist, i.e. a compromise on the strategically defined criteria and factors for the enterprise survival and development is indisputably necessary and possible. Simultaneous consideration of the systems dimension and the participants dimension in this problem situation indicates explicitly that the problem situation of managing the enterprise growth and development is determined by the corresponding complex - pluralist problem context.

Respecting the power of the different systems methodologies and bearing in mind the properties of the identified ideal types of the management problem contexts, each type of the problem context can - within the framework of the *System of Systems Methodologies* (SoSM) (Jackson, 2006a, pp. 872-874; Jackson, 2006b, pp. 651-653) - be associated with the appropriate theoretical-methodological approaches - Figure 1 The holistic theoretical-methodological and practical approaches to managing the problems in organizations:

- the relatively simple - unitary context: the Traditional OR, Systems Analysis, Systems Engineering;

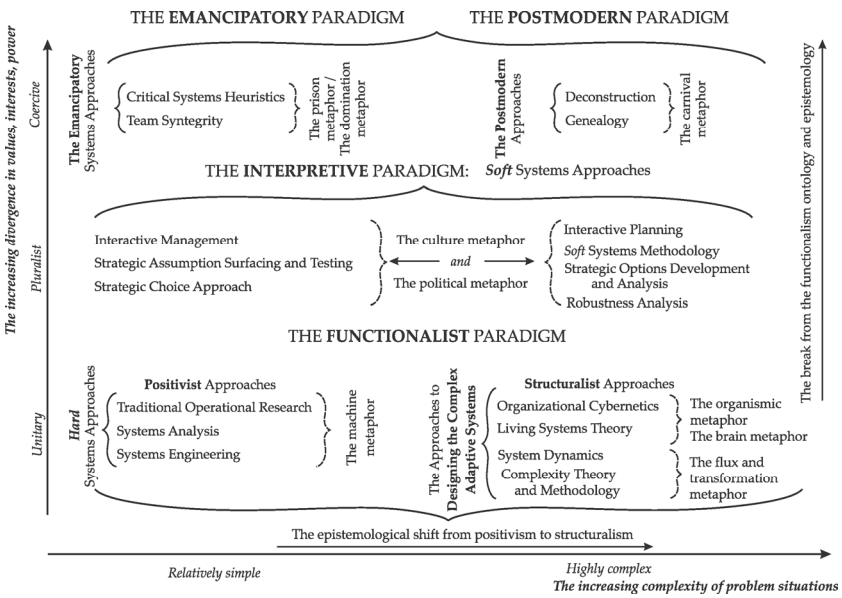

Figure 1 *The holistic theoretical-methodological and practical approaches to managing the problems in organizations*

- the complex - unitary context: Organizational Cybernetics, Theory and Methodology of Complexity, System Dynamics;

- the relatively simple - pluralist context: Strategic Assumption Surfacing and Testing, Interactive Management, Strategic Choice Approach;
- the complex - pluralist context: Soft Systems Methodology, Interactive Planning, Robustness Analysis, Strategic Options Development and Analysis;
- the relatively simple - coercive context: Critical Systems Heuristics, Team Syntegrity;
- the complex - coercive context: Deconstruction, Genealogy.

The systematization of the different theoretical-methodological approaches in the Figure 1 should not be treated strictly, but conditionally, because the particular methodologies - according to their broad foundations - transcend the identified problem contexts. In fact, the barriers between the relatively simple and complex, i.e. between the unitary, pluralist and coercive features of the management problem situations are set somewhat artificially so the resulting grouping the systems methodologies has a conditional character. Thus, a concrete choice of a systems methodology - that will be employed in structuring the problem situation - should be grounded on the knowledge resulting from the systems methodologies' systematization, rather than be determined by this systematization.

The presented grouping of the relevant theoretical-methodological approaches shows that each systems methodology can operate successfully in a particular situation but not in a different problem situation.

In view of the existence of the different classes of the problem situations, i.e. the different problem contexts, it can be stated that the existence of a number of the different systems approaches to tackling the management problems is not a weakness of systems thinking, but, contrary, it is its significant strength. That is, the systems methodologies' variety should not result in a confusion in practice, but, it represents a reliable basis for joining the corresponding effective methodology to each considered problem situation, for its structuring.

The relevant benefits of the SoSM's development and its employment in managing the problem situations in enterprises can be specified as follows (Jackson, 2000, p. 360):

- the SoSM enables the important assumptions (in the categories of complexity, i.e. systems, and the participants' relationships) of using each systems methodology's type to be revealed;
- the SoSM helps to understand the negative consequences of an employment of a certain systems methodology that is not appropriate to the particular management problem context;
- the SoSM is open to the new perspectives in the development of systems thinking and MS.

Taking into account the concrete management problem context type, the SoSM suggests which of the available systems methodologies should be used as the dominant, and which methodology (methodologies) should be employed as the supportive in structuring the problem situation. The SoSM therefore represents a scientifically grounded expression of pluralist, i.e. complementarist strategy for developing the contemporary MS (Jackson, 1999, pp. 12-22).

The systems methodologies for exploring and structuring the management of an enterprise's development and growth, for example, Interactive Planning, as the dominant methodology, and Critical Systems Heuristics, as the supportive methodology, are appropriate to the specified complex - pluralist problem context.

For this consideration, it is important that there are the significant theoretical-methodological differences between the alternative approaches within the applied systems thinking; but, on the other hand, in view of the interdisciplinary, transdisciplinary and transparadigmatic nature of the systems thinking, unlimited implications of so called the paradigm incommensurability (Kuhn, 1962, p. 149) should not be accepted. In addition, it is a fact that the different flows of the applied systems thinking underpin - at least on a basic level - the technical, practical, and emancipatory interest (Habermas, 1972, pp. 301-317) which people express in prediction and control, in improvement of mutual understanding, and in liberation and learning, i.e. removing the restrictions imposed by power relationships, respectively. Since the different methodological approaches are focused on the different aspects of a management task which is nevertheless the unitary task, a constructive dialog should be possible.

As a comprehensive conceptual framework within which the different holistic theoretical-methodological approaches - in accordance with their theoretical and methodological foundations and applicative potentials - are aligned with the corresponding problem contexts, the SoSM has been criticised from the different standpoints (Midgley, 2000). First of all, even though, in fact, there are real possibilities that the particular methodologies, i.e. their associated methods and techniques, can also be used for the aims which are different from those for which the respective instruments have originally been designed, it is indicated that the SoSM encourages accepting the only one interpretation of each methodology. Then, the SoSM has been criticized because it does not take into account the methodological flows that arise when the researchers learn from the different perspectives. Finally, it is argued that critical judgements on the research boundaries are not important only for the relatively simple - coercive contexts, but it is necessary to legalize the commitment to the critical awareness also in the problem contexts in which a use of power is a subtle and covert.

In Systems Science (SS) and MS, besides the SoSM, there are the different (Checkland, 1985, pp. 757-767; Mingers, 2003, pp. 559-570) approaches to classifying the methodologies for structuring the problem situations. An appropriate general classification (Mingers, 2003, pp. 559-570) of the MS-methodologies starts from the following common characteristics of all methodologies:

- a focus on taking action;
- developing the models by which the relevant aspects of the situation are expressed;
- making the implicit and explicit assumptions about: the ontology - which types of entities are considered as existing, the epistemology - in which way can be the valid knowledge acquired, and from where, and the axiology - what is evaluated and considered as just.

The resulting classification of the MS-methodologies should help the practitioners in their understanding of the assumptions underpinning the respective methodologies and their main objectives, in order to enable practitioners to make the founded and critically conscious choices, particularly when the appropriate combinations of the methodologies are designed in practice. Compared to the SoSM, the concerned classification of the MS-methodologies indicates that particular methodologies can be employed in the ways which are different from those which have been determined preliminarily in developing the methodologies, and they can also be used in the framework of the alternative paradigm.

THE SYSTEMS METAPHORS

Besides the presented exploration of the nature of the systems methodologies for structuring the problem situations and connecting the different systems approaches with the corresponding problem contexts, the appropriate analysis of the systems *metaphors* represents a particular theoretically and practically useful instrument for uncovering and researching into the assumptions that have been built into the different holistic theoretical-methodological flows. Through understanding of the systems metaphors and their interconnections, and through identifying the systems methodology which is complementary to the dominant metaphor, as a result, the bases for a creative consideration of the management problem situations are made; also, it is enabled the chosen methodology (methodologies) for structuring the concerned situation to use in a valid manner.

In a process of creative consideration of the problem situations in enterprises, and in the endeavours to structure the situations effectively and efficiently, it is necessary, first of all, to determine the alternative perspectives, i.e. perceptions and interpretations of each considered situation, and to identify and adequately express the situation's key features.

Relying on the systems ideas, a range of systems metaphors has been developed for generating the insightful angles of observing the problem situations. Generally, the systemic-metaphorical expressions of important perspectives of the management problem situations encourage the different ways of thinking and allow a focusing on, explaining and acting on the significant aspects of the complex phenomena of business economics.

Through the use of metaphors, i.e. comparisons and analogies, first of all, the different relevant aspects of the problem situations can be uncovered and expressed in the close and accepted categories. Then, the new modes of understanding, interpreting, and evaluating the organizational phenomena and management problems are developed by means of the metaphors, i.e. comparations and analogies. Respectively, the various complementary significant insights and findings about the problem situations that are explored from the different perspectives are provided through the use of the systems metaphors; as a result, a process of managing the complex and ambiguous problems is improving and facilitating (Tsoukas, 1991, pp. 566-585).

As the appropriate filters of observing, understanding, shaping the management problem situations from the different standpoints, the systems metaphors can be placed on any level of discussing and solving the particular problem. Through the systems metaphors, as the tools for conceptualizing the different contexts of the problem situations, the necessary insights into the theories of management and organizations are encompassed.

The following metaphors can be singled out as the key systems metaphors that illuminate the management problem situations from several relevant different viewpoints (Morgan, 1997; Jackson, 2006a, pp. 868-878):

- the *machine* metaphor - the organization as a closed system which consists of the standardized parts, and operates in a repetitive manner;
- the *organic* metaphor - the organization as an organism, i.e. an open system that is aimed at providing a survival;
- the *neuro-cybernetic* metaphor - the organization as a cybernetic system that is able to be viable, to be self-controlled, and to learn;
- the *culture* metaphor - a corporate culture determined by the various attitudes, opinions, beliefs that are accepted in the organization;
- the *political* metaphor - a team, a loose coalition, a prison, as the expressions of the unitary, pluralist, coercive relationships between the individuals and groups, respectively;
- the *psychic prison* metaphor - the focus on the ethical dimension of the organizations and the problem situations in them;

- the *flux and transformation* metaphor - understanding of the logic, i.e. the nature and sources of the changes that shape the social life;
- the metaphor of the *domination's instruments* - the focus on understanding how the actions that are meaningful from one viewpoint can be the exploitative from the other standpoints;
- the *carnival* metaphor - the recognition of the legitimacy of the diversities and varieties which have been most widely grasped;
- etc.

In accordance with the relevant perspectives of exploring and creative managing the enterprise growth and development, it can be stated that the following systems metaphors are appropriate to the specified complex - pluralist context:

- the neuro-cybernetic metaphor, that encompasses the extreme complexity of the system in question, and its ability to be viable and to learn;
- the political metaphor, specifically, a loose coalition, through which the legitimacy of the different perceptions and interpretations of the considered problem area is recognized and
- the culture metaphor, that reflects the different attitudes, beliefs, opinions accepted by the participants in the enterprise's problem area.

As it has been shown in the Figure 1, by using the idea about the systems metaphors, as a tool for underpinning the process of structuring the management problem situations, the progress has been made along the continuum of the relatively simple - complex problems, i.e. systems, and the continuum of the increasing divergences in participants' values and in their interests in the problem situations.

In fact, first of all, the progress along the continuum of the relatively simple - complex problems, i.e. systems, can be understood, for example, as a transition from the dealing with a mechanism to a larger interest in organicism - therefore, as the transition from the machine metaphor to the organic metaphor and the neuro-cybernetic metaphor. Respectively, when one moves along the dimension of relatively simple - complex management problems, the progress based on the gradual exploration of the machine metaphor (the traditional OR, Systems Analysis, Systems Engineering), the organic metaphor and the neuro-cybernetic (i.e. brain) metaphor (Organizational Cybernetics), and the flux and transformation metaphor (System Dynamics, Theory and Methodology of Complexity) is evident.

On the other hand, because of a recognition of the legitimacy of the different world-views, the relevancy of contextualism to the interpretive and emancipatory systems methodologies is obvious. That is, the progress along the dimension of the participants' values and their interests

in the problem situations corresponds to the gradual increasing significance of the culture metaphor and the political metaphor (Strategic Assumption Surfacing and Testing, Interactive Planning, Critical Systems Heuristics). The carnival metaphor can be singled out as the appropriate to the postmodernist approaches.

THE PARADIGMS OF DEALING WITH THE PROBLEM SITUATIONS

Respecting the multidimensional nature of management problem situations, it can be stated reasonably, first of all, that there are the different approaches to formulating the complex and ambiguous *problems* in organizations. Also, the available approaches to finding the *solutions* to these highly interactive problems are characterized by the corresponding diversity. This further means that the scientific *paradigms* - appropriately conceived and implemented - have a special place in the holistic instrumentarium for dealing with the problem situations, besides the systems methodologies, as tools for structuring the problem situations and the systems metaphors, as tools for uncovering and exploring the relevant dimensions of the complex and multifaceted problems in organizations.

A paradigm can be determined originally as a set of implicit rules of identifying a scientifically valid problem and what should constitute the solution to this problem (Kuhn, 1962, p. 102; 108). The paradigms are the sources of problem areas, methods, and standards of the solutions accepted by the scientific community at a given time. A paradigm shift means, as a rule, the significant changes in the criteria that determine the legitimacy of the problems, and the suggested solutions.

Each paradigm that is accepted by the scientific community indicates to a particular understanding of the reality, to the problems that have to be tackled and to the ways in which these problems should be solved. A valid paradigm ought to address the ontological, epistemological, teleological, theoretical, and methodological issues that are relevant to the process of scientifically grounded and practically useful dealing with problems (van Gigch, 2003, pp. 499-506).

As the particularly significant instrument for creative managing the problem situations in organizations, the paradigms can be classified preliminarily as follows (Jackson, 2000; Jackson, 2003; Jackson, 2006a, pp. 868-878; Jackson, 2006b, pp. 651-653):

- the functionalist paradigm,
- the interpretive paradigm,
- the emancipatory paradigm, and
- the postmodernist paradigm.

The functionalist methodological MS approaches are relied on the corresponding *functionalist* paradigm; they endeavour to ensure the suc-

cessful functioning of the system under consideration. It is thought that by using the scientific methods and techniques, an understanding of the ways in which the systems operate can be gained, and that this knowledge enables the managers to control the organizations and operations occurring in them. Within this *positivist* framework, the functionalism seeks to generate the necessary knowledge through uncovering the relationships between the "surface" variables constituting the concerned system. On the other hand, within the *structuralist* framework, the functionalism endeavours to penetrate deeper in order to reveal the "structures", i.e. the patterns and regularities; it is argued that complex systems' behaviour can be identified and explained through uncovering and examining these patterns and regularities.

The traditional OR or MS has been determined by the functionalist paradigm, i.e. by its positivist variant which strives to ensure an efficient managing the systems in order to achieve the known goals. The behaviour of these systems have to be predictable, and they have to be regulated, i.e. controlled in order to reach the goals of their controllers. On the other hand, System Dynamics, Organizational Cybernetics and the Theory and Methodology of Complexity also belong to the functionalism but the functionalism's structuralist variant. Their aim is to reveal the laws that underlie the systems' behaviour, as well as to formulate these laws in the categories of systemic archetypes, cybernetic principles, so-called strange attractors, respectively. When the managers equipped with such a clarifying power, they can ensure that their organizations learn, adapt to, and survive in the changeable environments.

The interpretive methodological MS approaches and their corresponding *interpretive* paradigm rely on the belief that the social systems, i.e. organizations, and the problem situations in them are determined by the people whose - often different - goals result from their different interests and interpretations of situations in which they function. The focus is therefore on understanding of the different meanings that the people ascribe to a joint action, and on uncovering where these meanings overlap, so that can lead to a new particularly conceived accepted activity. It is about the various systems methodologies - for example, Soft Systems Methodology, Interactive Planning, Strategic Options Development and Analysis - which are underpinned by the soft systems thinking, and which are interpretive in their own nature.

For example, in Soft Systems Methodology (Checkland, 1985, pp. 757-767), the systems are understood as the observers' mental constructions. Based on the different world views, the different descriptions and explanations, i.e. interpretations of the reality of a considered problem situation are modelled. Then, a debate on the implications of these different world-views - that have been included in the formulated models - is conducted. If a common basis is found, then an agreement on the action can be reached.

Relying on the corresponding paradigm of the *emancipatory* systems thinking, the emancipatory methodological MS approaches are focused on the 'emancipation', i.e. liberating the individuals and groups who are subjugated, i.e. oppressed in organizations and society. An attention is paid to all forms of discrimination - the class discrimination, the status discrimination, the age discrimination etc.

Critical Systems Heuristics (Ulrich, 1994) is one of the key systems methodologies of the emancipatory paradigm. Through this methodology, all stakeholders - especially those who are deprived of their rights, damaged, i.e. who are disadvantaged in relation to the powerful - should be introduced to the nature of the problem situation designs, i.e. the nature of the social system they have to face with, and, also, they should be empowered to participate in the debates on the validity of such designs.

The postmodernist methodological MS approaches and practice, together with their corresponding *postmodernist* paradigm, are opposed to the so called the modernist reality (Alvesson & Deetz, 1996, pp. 191-217), which - according to the postmodernists - characterizes the other three general paradigms of the social theories. Namely, the endeavours of the functionalist, interpretive, and emancipatory paradigm and their methodologies to provide a comprehensive clarification of the considered real-world problems are strongly challenged. Instead, they insist on a learning through uncovering the conflicts which are contained in problem situations, providing a room for the undervalued perceptions, and encouraging the variety and diversity.

In accordance with the presented considerations of a holistic instrumentarium for creative managing the problem situations in organizations, it can be stated that the systems thinking, particularly, the contemporary critical systems thinking, implies a theoretical-methodological breakthrough compared to the classical approach in relation to the dimension of the relatively simple - complex problems and the dimension of the participants' values/interests in problem situations. Respectively, it is about an appropriate *paradigm shift* (Kuhn, 1962, p. 84, 149). In fact, first of all, from the standpoint of the continuum of relatively simple - complex problems, a necessary epistemological change from positivism to structuralism has been made. On the other hand, from the viewpoint of the continuum of the increasing differences in participants' values/interests, a break with the ontology and epistemology of the functionalism has been necessary. Also, understanding of the nature of conflicting and coercive problem contexts has implied a corresponding respect for - within the framework of critical systems thinking - the emancipatory paradigm and postmodernist paradigm.

The insights and findings resulting from consideration of the different systems approaches to management - in view of the theoretical and methodological foundations of these approaches - provide a basis for an

argumentative critique of each systems approach. The different paradigms - embodied in the different systems methodologies - provide the different theoretical and methodological assumptions for the different types of the systems approaches; as the relevant resulting problem, so called *paradigm incommensurability* appears (Kuhn, 1962, p. 149; Dando & Bennett, 1981, pp. 91-103; Mingers, 2006; Jackson, 2011, pp. 811-813; Zhu, 2011, pp. 784-798).

Critical systems thinking recommends in principle the use of the different systems methodologies in the process of dealing with any problem situation, in a manner that should enable an argumented taking over the strengths of certain methodologies and acting against the weaknesses of the other methodologies. In fact, critical systems thinking - as a support for the pluralism, i.e. complementarism in the contemporary SS and MS - is dealt with the relevant theoretical-methodological and applicative issues concerning the conditions, opportunities, ways of the parallel employment of the different systems approaches that are founded on the opposing epistemological and ontological assumptions (Pollack, 2009, pp. 156-167; Jackson, 2011, pp. 811-813).

CONCLUSION

The growing complexity, ambiguity and variety of the management problem situations in contemporary circumstances implies their appropriate *holistic reconceptualization*. In other words, a valid determining and creative managing the problem areas in enterprises - that are important to the enterprises' survival and development - require that the problem situations have to be observed and explored as the complex, dynamic, interactive, multidimensional manageable systems of problems.

A conceived dealing with the management problem situations and purposeful intervening in them, with the aim to holistically and continually improve an enterprise functioning, implies, first of all, an identification of - through appropriate *paradigms* - the ontological, epistemological and axiological framework within which the relevant problem areas of the enterprise will be observed and researched.

Then, all important sub-problems of the considered management problem situation, their mutual relations and the complex connections between the situation and its relevant environment have to be examined holistically and in detail. In a process of structuring the management problem situations, in dependence on a concrete management problem context, the corresponding structuralist-functionalist, interpretive, emancipatory, postmodernist *systems methodologies* are employed.

In addition to the above, a multidimensionality of the management problem areas in enterprises, i.e. numerous and different possible perspectives, perceptions and interpretations of one and the same problem

situation involve the use of the *systems metaphors* by which the relevant different dimensions of a system of the management problems can be encompassed, expressed and analyzed appropriately.

Relying on the contemporary critical systems thinking, the use of the concerned holistic instrumentarium in managing the problem situations in organizations, implies, first of all, critical awareness of the strengths and weaknesses of each of the identified research instruments. At the same time, an endeavour to ensure - through an appropriate choice and implementation of these instruments - an improvement of managing the enterprises, an enhance of understanding between the participants in problem situations, and a liberation from the effects of power relations is vitally important. Additionally, in order to create a basis for making the scientifically founded, socially responsible and practically usefull choices in enterprises, the *critical systems thinking and practice* (Petrovic, 2012b, pp. 1-13), in accordance with their own commitment to pluralism, indicate a recognition of the legitimacy of the various perceptions of the problem areas in enterprises, and the suitable combined employment of the chosen instruments.

The conditions, ways, effectiveness and efficiency of using the concerned holistic instrumentarium in managing the problem situations in enterprises have been reviewed and verified in numerous and various Case Studies (Pollack, 2009, pp. 156-167; Howick & Eden, 2011, pp. 868-878; Azadeh, Darivandi & Fathi, 2012, pp. 66-86; Hammer, Edwards & Tapinos, 2012, pp. 909-919; Siriram, 2012, pp. 87-100; Ulrich, 2012, pp. 1307-1322).

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HOLISTIČKI INSTRUMENTARIJUM KREATIVNOG UPRAVLjANjA PROBLEMSKIM SITUACIJAMA

Rezime

U savremenim okolnostima, upravljački problemi u preduzećima, po pravilu, predstavljaju složene rezultante jednovremenih dejstava brojnih i različitih ekonomskih, organizacijskih, tehničkih, tehnoloških, psiholoških, sociioloških, kulturoloških, političkih determinanti. Stoga, oni bi trebali biti posmatrani i istraživani kao odgovarajuće problemske situacije. Reč je, zapravo, o kompleksnim, dinamičkim, interaktivnim, višeznačnim, upravljivim sistemima problema.

Kreativno upravljanje holistički rekonceptualizovanim složenim i višedimenzionalnim problemima u organizacijama implicira odgovarajući naučno utemeljen i praktično koristan instrumentarijum.

Ključna hipoteza, koja je u radu preispitivana i potvrđena, je da osmišljeno upravljanje problemskim situacijama u preduzećima podrazumeva razvijanje i korišćenje holističkog instrumentarijuma koji obuhvata: sistemske metodologije strukturiranja sistema kompleksnih upravljačkih problema, sistemske metafore konceptualizovanja i otkrivanja relevantnih perspektiva posmatranja i istraživanja problemskih situacija, i odgovarajuće razvijene paradigme koje obezbeđuju različite konceptualne okvire bavljenja problemskim situacijama.

Naučni metod upotrebljen u procesu istraživanja je savremeno kritičko sistemsko mišljenje, koje je obavezano na svoja tri glavna određenja: kritičku svest, unapređivanje i pluralizam.

Zapravo, osmišljeno bavljenje upravljačkim problemskim situacijama, i svrhovito intervenisanje u njima, kako bi se funkcionisanje preduzeća moglo celovito i kontinuirano unapređivati, podrazumeva, pre svega, identifikovanje - posredstvom odgovarajućih paradigmi - ontološkog, epistemološkog i aksiološkog okvira u kome će relevantna problemska područja preduzeća biti posmatrana i istraživana. Kao

relevantne paradigme bavljenja problemima realnog sveta poslovne ekonomije izdvajaju se funkcionalistička paradigma sa svojom pozitivističkom i strukturalističkom varijantom, interpretativna, emancipatorna i postmodernistička paradigma.

Zatim, svi bitni potproblemi razmatrane upravljačke problemske situacije u preduzeću, njihovi međusobni odnosi, i složene sprege između istraživane problemske oblasti i njenog okruženja moraju biti sveobuhvatno i detaljno ispitani. U procesu strukturiranja upravljačkih problemskih situacija, u zavisnosti od dimenzije kompleksnosti, tj. sistema (relativna jednostavnost ili ekstremna složenost), i dimenzije odnosa učesnika u problemskoj situaciji (unitarni, pluraliastički, prisilni), opredeljuje se konkretan upravljački problemski kontekst, odnosno, odabiraju i implementiraju - kao dominantna metodologija i kao metodologija podrške - odgovarajuće strukturalističko-funkcionalističke, interpretativne, emancipatorne, i/ili postmodernističke sistemske metodologije.

Uz navedeno, višedimenzionalnost upravljačkih problemskih oblasti u preduzećima, odnosno, brojne i različite moguće perspektive posmatranja, tj. percepcije i interpretacije jedne iste problemske situacije podrazumevaju korišćenje odgovarajućih sistemskih metafora, kojima relevantni, različiti aspekti sistema upravljačkih problema mogu biti primereno obuhvaćeni, eksplicitno iskazani i detaljno istraženi. Kao ključne, izdvajaju se mašinska, organska, neurokibernetska metafora, metafora kulture, politička metafora, metafora psihičkog zatvora, metafora toka i transformacija, metafora instrumenata dominacije, metafora karnevala.

Oslanjajući se na savremeno kritičko sistemsko mišljenje, korišćenje dotičnog holističkog instrumentarijuma u upravljanju problemskim situacijama u organizacijama, zahteva, pre svega, kritičku svest o snagama i slabostima svakog pojedinog od identifikovanih istraživačkih instrumenata. Istovremeno, od ključne važnosti je nastojanje da se primerenim izborom i implementacijom ovih instrumenata u bavljenju problemima, problemskim situacijama i dilemama povezanim s njima podrži: a) unapređivanje upravljanja preduzećima, b) unapređivanje razumevanja između učesnika u problemskim situacijama, i c) oslobađanje od dejstava odnosa moći. Uz to, u cilju kreiranja osnova za pravljenje naučno utemeljenih, društveno odgovornih i praktično korisnih izbora u preduzećima, kritičko sistemsko mišljenje i praksa, shodno svojoj obavezanosti na pluralizam upućuju na priznavanje legitimiteta različitim shvatanjim istraživanih problemskim oblasti u preduzećima i odgovarajuće kombinovano korišćenje izdvojenih instrumenata.

Uslovi, načini, efektivnost i efikasnost korišćenja dotičnog holističkog instrumentarijuma u upravljanju problemskim situacijama u preduzećima preispitivani su i potvrđeni u brojnim i različitim studijama slučajeva.