THINKING-ACTIVITY SCHEME AS A COMMUNICATION BRIDGE BETWEEN SYSTEMS THINKING AND SYSTEMS PRACTICE

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ABSTRACT

Exploring ways to co-organize systems thinking and systems practice we discuss the answer of Russian systems thinking which was developed by the Moscow Methodological Circle (MMC).

MMC was organized in USSR in the year of J. Stalin's death (1953) and was led for more than forty years by G. P. Shchedrovitsky (1929–1994). Now it exists as the "Methodological Movement" and a few institutions associated with it.

MMC developed "methodological thinking", which was characterised by the following general features and principles:

1) holism and reflexivity in relation to the other approaches and types of thinking (in science, design, engineering, socio-cultural and law studies, etc.);

2) practical orientation (connections thinking-activity, which used systems approach as the means of organizing processes of resolving complex problems by multi-professional and transdisciplinary teams, etc.);

3) reflectivity as practical orientation of thinking to itself, i.e. its capability to re-construct and re-direct itself;

4) the "methodological turn" from thinking about systems as objects to organizing, performing and reflecting the process of systems thinking in practice.

The shift from objects to the process of systems thinking which was mentioned above is characteristic for MMC from the very beginning of its activity. It corresponds to the shift of researchers interest from "systems sciences" to "systems rationality" – as it is discussed in holistic systems thinking approaches. This methodological turn has allowed MMC to formulate original vision of problems of the systems approach: not to investigate "systemic objects", but to conceptualise and resolve "systemic situations" as a form of work with complex problems. These systemic situations were considered as including subjects of thinking and action into the field of systems practice and reflection.

Now MMC systems methodology has three basic components which are the foundations of System-Thinking-Activity Approach (STA):

1) systems thinking (as "methodological thinking" described above);

2) Thinking-Activity Scheme (an intellectual construction called by "scheme" in MMC is a diagram linked to the certain model as its meaning) and moderation technologies;

3) Systemic 3D-Methodology.

In Thinking-Activity Scheme (published in 1983) thinking and practical activity are represented in the form of different "layers" ("Pure Thinking" and "Thinking-Action"), divided by a "Thinking-Communication" layer. Links between three layers of

Thinking-Activity Scheme

Thinking-Activity Scheme are mediated by Reflection and Understanding processes. "Thinking-Communication" layer in Thinking-Activity Scheme provides collectiveness of Thinking-Activity and allows to govern it by the means of moderation technologies. We use them in order to apply STA-Approach to systemic situations from practice. Moderation technologies are considered as the mode of communicative management supporting adhocratic type of interaction and deliberative communication, i.e. the "horizontal" and not-alienating interaction in multi-professional teams providing collectively-distributed thinking and multi-positional organization of resolving systemic situations which bear in themselves complex problems.

Systemic 3D-Methodology is the principle of thinking in the space of two "orthogonal" planes:

1) Object-Ontological plane with schemes and objects of practical theory located on it;

2) Organizational-Activity plane with schemes organizing multi-professional communications and methods, forms and instruments of transdisciplinary thinking.

Methodological schemes are specific MMC instruments or intellectual constructions, which can co-organize Object-Ontological and Organizational-Activity planes of 3D-Methodology as a complete reflexive 3D-space and be used as instruments on both planes. Using Thinking-Activity Scheme in this function with the help of moderation technologies allows researchers and practitioners to bridge systems thinking and systems practice in moderated forms of events organization (seminars, "round tables", transdisciplinary conferences like ISSS etc.) and to do the same in process forms of workflow organization: project groups, foresight, Organizational-Activity Games (OAG), strategic sessions, staff games, civil juries, wisdom councils, etc.

Now Thinking-Activity Scheme is implemented in consulting, education, city and regional development, public policy, public expertise procedures, organizing of public-political communications, conflict resolving and mediation procedures. In future it will be useful in international relations, cross-cultural interactions, global problems resolving, etc.

Keywords: systems thinking; systems practice; the Moscow Methodological Circle (MMC); methodological thinking; methodological schemes; Thinking-Activity Scheme; System-Thinking-Activity Approach (STA); systemic 3D-Methodology, moderation technologies.

INTRODUCTION

May be it is good idea to celebrate 100th anniversary of the Russian systems thinking in 2017. We can't point the exact date, because "Tektology: Universal Organization Science" by Alexander Bogdanov (1873–1928) was published during ten years (Bogdanov, 1922): volume I in 1912, volume II in 1917 and volume III in 1922 (together with re-edited I and II volumes). This book anticipated many of the ideas that were developed later by Norbert Wiener in "Cybernetics" (Wiener, 1948) and Ludwig von Bertalanffy in "General Systems Theory" (von Bertalanffy, 1968). In 1928 the German edition of Tektology was published, and theoretically there are some probability that both Wiener and von Bertalanffy might have read it. But in any case Tektology became the beginning of the Russian systems thinking.

In the USSR the name of Bogdanov and his works were de facto prohibited. But in spite of this fact he had worthy followers in *the Moscow Methodological Circle (MMC)*, who developed Bogdanov's "organizational point of view". So in this paper, exploring ways to

co-organize systems thinking and systems practice, we discuss the answer of the Russian systems thinking which was developed by MMC. The structure of the work is following:

- we describe roots, the general framework and main concepts of MMC and then compare them with key Western systems methodologies and reflect about the System Of Systems Methodologies (SOSM) by Mike C. Jackson (part 1);

- we introduce and discuss Thinking-Activity Scheme as the basic model of System-Thinking-Activity Approach (STA) which allows to conceptualize and resolve systemic situations (part 2);

- we consider STA in Practice, including moderated communications and forms of specific MMC systems practices based on Thinking-Activity Scheme and two cases from territory development practice (part 3).

MMC: ITS ROOTS, GENERAL FRAMEWORK AND MAIN CONCEPTS IN COMPARATIVE PERSPECTIVE

MMC was created in the USSR in the year of J. Stalin's death (1953) when logic and epistemology was the only area of free philosophical thought (Tabachnikova, 2007; Rozin, 2017). Like the Society for General Systems Research (it is original name of the International Society for the Systems Sciences – ISSS), MMC has four founders: Alexander Zinoviev (1922–2006; further he became a famous Russian logician and writer of social critique), Merab Mamardashvili (1930–1990; an outstanding Russian and Georgian philosopher), Boris Grushin (1929–2007; a well-known Russian philosopher and sociologist, the pioneer of public opinion polling in the Soviet Union) and Georgy Shchedrovitsky (1929–1994; since 1958 he became the leader of MMC and the organizer of permanent methodological seminars).

Now MMC exists as the "Methodological Movement" and a few institutions associated with it. The co-ordinating institution of the "Methodological Movement" is Non-Profit Research Foundation "The Shchedrovitsky Institute for Development" (www.fondgp.org). Annually the Foundation organizes the Conference in memory of G. P. Schedrovitsky. There are a number of methodological seminars in Russia and countries of former Soviet Union. For example, the International Methodological Seminar in Systems Thinking and Institutional Approach is working permanently since 2009. During 8 seasons it passed 127 meetings. Russian speaking people from worldwide can participate in this seminar by means of Internet technologies.

The Idea of Methodological Thinking, Three Programmes and Three Paradigms of Thinking within MMC

MMC: Roots and Forerunners
MMC has its historical roots in classical German philosophy and Marxism. As two other forerunners we can consider "Tektology" by Alexander Bogdanov (mentioned above) and cultural-historical theory of thinking by Lev Vygotsky (1896–1934), who was not only famous psychologist in the fields of developmental psychology, child development and education, but the philosopher whose framework includes interpretations of the cognitive role of signs as a mediation tools.

L. S. Vygotsky marked out the significant roles of cultural mediation and interpersonal communication in the child development process. Answering the question how thinking

and other higher mental functions develop through these interactions, he represented the shared knowledge of a culture – the process of internalization. The idea of considering the process of internalization as mediated by signs became an important part of Vygotsky's theory of thinking based on the systemic inter-relationship of language and thought development. This theory was presented in Vygotsky's book "Thinking and speech" (Vygotsky, 1999), which Russian edition was published in 1934 (first English translation was published in 1962 with essential abbreviations and under an incorrect translation of the title "Thought and Language"). This book inspired the first published paper by G. P. Schedrovitsky which has been devoted to "language thinking" (Shchedrovitsky, 1957).

The main question for MMC participants was the Marxist one: how to change the World? This question was raised under the influence of Theses on Feuerbach by Karl Marx (Marx, 1969, Thesis Eleven). But the answer of MMC was the different from Marxism: in order to change the World we shouldn't perform any direct social action – we can change the World by the means of changing our thinking. Another idea which came to MMC from classical German philosophy and Marxism was the idea of development: we can change the World and our thinking by means of their development.

MMC as a Big Project and its General Framework: the Idea of Universal and Developing Methodological Thinking

If we consider the development of MMC as a big project we can determine some requirements to thinking which allows us to change the World and thinking which is understood in the established framework (Maracha, 2014). These requirements are the following:

- holism and reflexivity in relation to the other approaches and types of thinking (in science, design, engineering, socio-cultural and law studies, etc.);

- practical orientation (connections thinking-activity, which uses systems approach as the means for organizing processes of resolving complex problems by multi-professional and transdisciplinary teams, etc.);

- reflectivity as practical orientation of thinking to itself, i.e. its capability to re-construct and re-direct itself;

- the "methodological turn" from thinking about systems as objects to organizing, performing and reflecting the process of systems thinking in practice.

The first feature/principle is systemic one, the second and the third are constructivist, and the fourth follows from Bogdanov's "organizational point of view". These general features and principles have their general framework: the idea of "methodological thinking" as universal and developing.

Three R&D Programmes and Three Paradigms of Thinking within MMC

Moving in general framework of the idea of "methodological thinking" as universal and developing from 1953 MMC has generated three R&D programmes and three paradigms of thinking.

Three MMC programmes for research and development of thinking are the following (Rozin, 2017):

Thinking-Activity Scheme

- "Logical Researches of the Thinking" (LRT): thinking is considered epistemologically (as a process of generation of new knowledge) and as a process of operating with the signs replacing objects of thought (Shchedrovitsky, 1957);

- "General Activity Theory" (GAT) and "System-Activity Approach" (SA (Shchedrovitskii, 1988; Shchedrovitsky, 2002; Dubrovsky, 1997, 2001, 2004, 2011));

- "System-Thinking-Activity Approach" (STA) and "System-Institutional Approach" (SI) as its specific kind for social systems and knowledge (Maracha, 2014).

Three MMC paradigms of thinking are the following (Maracha, 2014):

- "Epistemological-Semiotic Paradigm": thinking operates with objects as Natural Systems;

- "Thinking-as-Activity Paradigm": thinking operates with Human Activity Systems;

- "Socio-Cultural Thinking-Activity Paradigm": thinking deals with Socio-Cultural Systems.

MMC and SOSM: Systemic Typology of Systems Thinking, Rationality and Governing

Three Concepts of System within MMC
Systems approach in MMC practice involves three concepts of system (Maracha, 2014):

- "System-1": Natural "Thing" Systems (Shchedrovitzky, 1966);

- "System-2": Human Activity Systems (Shchedrovitsky, 2002; Dubrovsky, 2001, 2004; Reut, 2014);

- "System-3": Socio-Cultural Systems, or Systems with "Internal Sense" (e.g. Institutions as a case of Systems with "Internal Sense" (Maracha, 2014; Reut, Baranov and Maracha, 2016)).

Three concepts of system within MMC have become results of the different programmes and correspond to different paradigms of systems thinking.

MMC and key Western systems methodologies: reflections about SOSM
In 1984 M. Jackson and P. Keys have offered the System Of Systems Methodologies – SOSM (Jackson and Keys, 1984) which then has been described and presented in various ways (Jackson, 1993, 2000; Flood and Jackson, 1991). In the book (Jackson, 2003) SOSM represents also the typology of systems thinking. It includes four types of systems thinking in the "ideal-type" grid of problem situations or problem contexts:

- Type A: Hard Systems Thinking in wide sense (the problem context is Improving Goal Seeking and Viability);

- Type B: Soft Systems Thinking (the problem context is Exploring Purposes);

- Type C: Emancipatory Systems Thinking (the problem context is Ensuring Fairness);

- Type D: Postmodern Systems Thinking (the problem context is Promoting Diversity).

Thinking-Activity Scheme

The grid of problem contexts is two-dimensional: the "systems" and "participants" dimensions used to establish it. The vertical axis expresses a continuum of system types conceptualized at one extreme as relatively simple, at the other as extremely complex. The horizontal axis classifies the relationships that can exist between those concerned with the problem context – the participants – in three types: "unitary", "pluralist" and "coercive".

The first two columns of SOSM correspond to Peter Chekland's distinction of Hard and Soft systems methodologies (Chekland, 1981 – M. C. Jackson directly refers to this book), and to G. P. Shchedrovitsky's distinction of "System-1" and "System-2" (Shchedrovitsky, 2002). In 2012 Viacheslav Maracha has paid attention to this circumstance and suggested to put the concept "System-3" in compliance to the third column, having united Jackson's Type C and Type D in the uniform type of thinking (Maracha, 2013).

This idea seems to be worth mentioning by the following reasons: first, problem contexts of Ensuring Fairness and Promoting Diversity could be present at the same situation; secondly, Postmodern Systems Thinking is not the only systems methodology dealing with complex coercive systems; thirdly, being based only on a character of participants of a problem situations we get rid of quite unclear distinction between simple and complex systems.

Positions of MMC concepts (and paradigms of thinking) in SOSM are presented in the table 1. It demonstrates that MMC as an intellectual tradition chooses not postmodernist (relativistic), but rather rational answer to the challenge of Postmodern situation. System-Thinking-Activity Approach (STA) is a systemic and thinking-activity constructivism.

Table 1. MMC concepts and paradigms of thinking in SOSM

		Participants		
		Unitary	**Pluralist**	**Coercive**
Systems	**Simple**	**Type A** System-1 LRT	**Type B** System-2 SA	**Type C** System-3 STA, SI
	Complex			**Type D** Sys-3 STA

Systems Thinking and Typologies of Rationality and Governing
In 2015 V. Maracha offered to use in this grid V. Stepin's typology of scientific rationality (Stepin, 2005) and establish the correspondence between three types of scientific rationality (classical, non-classical, post-non-classical), three concepts of system and three columns in Jackson's grid (Maracha, 2015, 2016). This approach allows to relate both Emancipatory and Postmodern Systems Thinking to post-non-classical rationality. Also we can correspond three concepts of system with main types of organizational structure and distinguish three types of governing: Control&Administration, Management and Governance (table 2).

Table 2. Systems thinking and typologies of rationality and governing

Type of Systems Methodology	Type of Rationality	Systems Concepts / Basic Categories	Type of Organiza-tional Structure	Type of Governing
System-1: Hard/Unitary – strict dependence	Classical	Natural "Thing"	Hierarchical	Control& Administration (technical-cybernetic)
System-2: Soft/Pluralist – independence	Non-classical	Human Activity	"Market"	Management (organizational-activity, Cybernetics-II)
System-3: Coercive – inter-dependence	Post-non-classical	Socio-Cultural Systems / Thinking-Activity	Public-Network	Governance (political, institutional, reflective-communicative, Cybernetics-III)

THINKING-ACTIVITY SCHEME AS THE MODEL OF CONCEPTUALIZATION AND RESOLVING OF SYSTEMIC SITUATIONS

Conceptualization of Systemic Situations, Configuration Method and Systems Practice

Antinaturalism: Shift from Objects to Thinking and Human Activity
The shift from objects to the process of systems thinking which was mentioned above is characteristic for MMC from the very beginning of its activity. It corresponds to the shift of researchers interest from "systems sciences" to "systems rationality" – as it is discussed in holistic systems thinking approaches. This methodological turn has allowed MMC to formulate original vision of problems of the systems approach: not to investigate "systemic objects", but to conceptualise and resolve "systemic situations" as a form of work with complex problems. These systemic situations were considered as including subjects of thinking and action into the field of systems practice and reflection.

Two Basic Ways of Resolving Systemic Situations
MMC has offered two complementary basic ways for resolving systemic situations (Maracha, 2011):

- epistemological, based on the configuration method as a method of systems thinking;

- practical, using methodological seminars and Organizational-Activity Games (OAG) as the methods of communicative systems practice.

Both ways include reflective practice carrying out both development of knowledge, and development of the activity/thinking-activity, providing completeness of knowledge development life cycle.

Conceptualization of Systemic Situations: Two Components
Conceptualisation of systemic situations in MMC includes two components (Schedrovitsky, 1971):

- subject matter and object distinction when systemic situations are considered as situations of presence of several subject representations of one object which need to be correlated and connected with each other;

- "the Scheme of Multiple Knowledge" and Configuration Method based on configurator-model and/or configuration plan.

"The Scheme of Multiple Knowledge"
In the scheme of multiple knowledge we consider particular points of view on the object as "projections" (subject "cuts") – which are taken at various turns of a whole "multi-dimensional" object (figure 1) that should be re-created or restored on the base of its projections (figure 2).
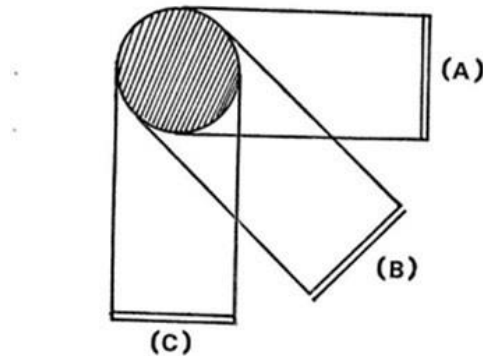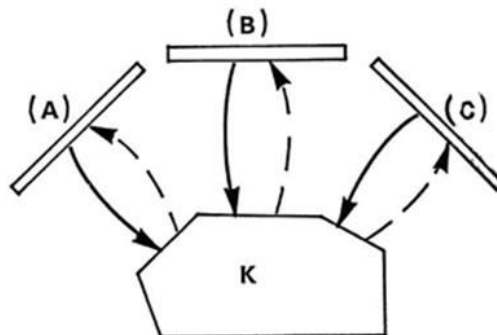

Figure 1. "The Scheme of Multiple Knowledge"

Figure 2. "Projections" and Configurator-Model (K)

<div align="center">**Thinking-Activity Scheme**</div>

The Configurator-Model and the Configuration Method
The restored complex object is called the Configurator-Model, and the method of construction of similar models – the Configuration Method (figure 3). The result of its application is systemic construction of synthesized knowledge (figure 4).
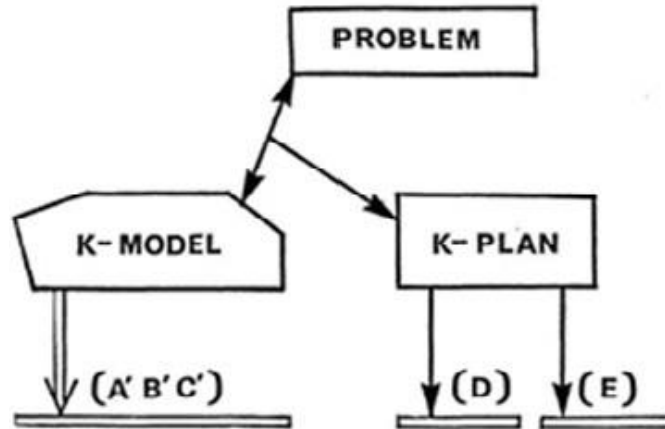

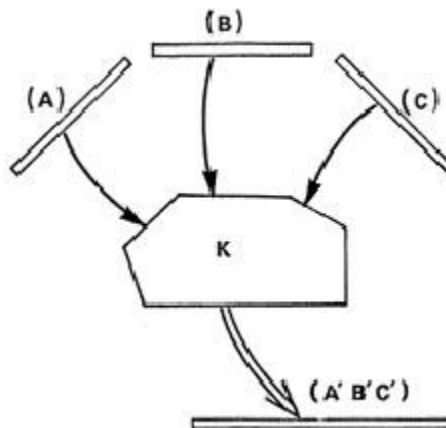<div align="center">**Figure 3. The Configuration Method: Configurator-Model and Configuration Plan**</div>

<div align="center">**Figure 4. Systemic construction of synthesized knowledge**</div>

The Semiotic Concept of Knowledge
Each "projection" in the scheme of multiple knowledge can be represented in the following two-level scheme of simple attributive knowledge (figure 5) based on the semiotic concept of knowledge (Shchedrovitzky, 1966). The first level is formed by operating upon an object X by means of procedures $\Delta_1, \Delta_2, ...$ The results of these operations are expressed in symbols (A), (B), which fixate and replace the content $[X\Delta_1\Delta_2 ...]$ singled out in a special activity $\lambda_1\lambda_2$ – a formal operation on the symbols – and all this constitutes the second level. The results of transformations on the symbol forms of the second level are related to the

object X. The original substitution and the reciprocal relation are represented by arrows from the first level to the second level and back.

$$\left| \begin{array}{ll} (A) \quad (B) \quad \lambda_1 \lambda_2 \\ \\ X \; \varDelta_1 \varDelta_2 \cdot \cdots \cdot \end{array} \right.$$
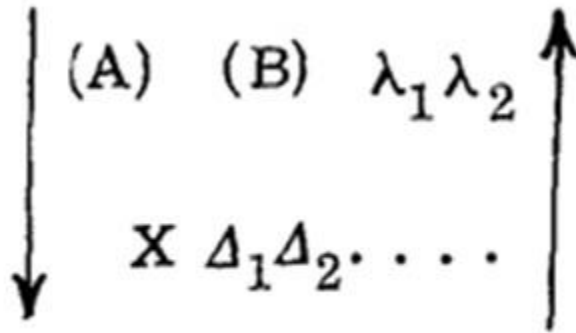
Figure 5. Simple (two-level) attributive knowledge

The symbol constructions (A), (B) and the operations $\lambda_1 \lambda_2$ performed upon them may themselves give rise to other levels of knowledge to which new meaningful comparisons are applied; in other words, the symbols themselves become the things operated upon (figure 6). On higher levels of the scheme we can use mathematical operations and models which allow us to deal with quantitative data.
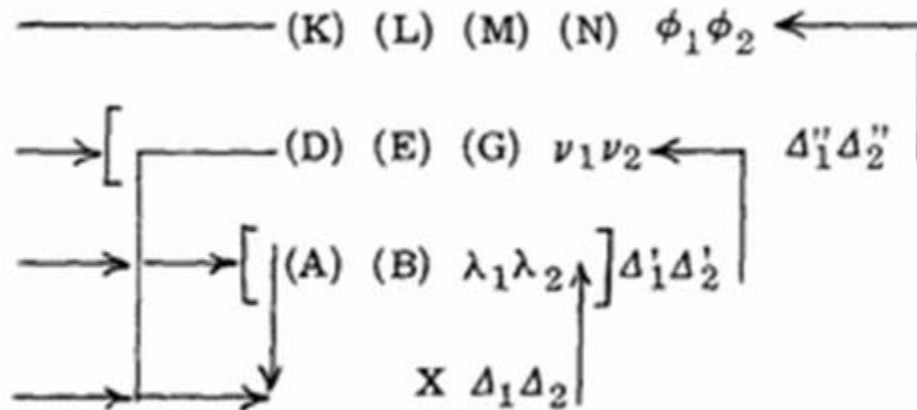
$$\begin{array}{l} \text{------------------} (K) \; (L) \; (M) \; (N) \quad \phi_1 \phi_2 \leftarrow \text{------} \\ \\ \rightarrow \left[\text{------} (D) \; (E) \; (G) \quad \nu_1 \nu_2 \leftarrow \right] \quad \varDelta_1'' \varDelta_2'' \\ \\ \rightarrow \rightarrow \left[(A) \; (B) \; \lambda_1 \lambda_2 \right] \varDelta_1' \varDelta_2' \\ \\ \qquad \qquad X \; \varDelta_1 \varDelta_2 \end{array}$$

Figure 6. Complex (multi-level) attributive knowledge

The Configuration Method and Systems Practice
How the Configuration Method is connected with systems practice?
The Configuration Method is proved and involved into systems practice via representing thinking and systemic situations as sub-systems of Thinking-Activity System. And "the Scheme of Multiple Knowledge" was represented as the scheme of the multi-positional organization of Thinking-Activity in which the Thinking-Activity acted as design or programme for resolving systemic situations.

System-Thinking-Activity Approach: Systems Thinking, Thinking-Activity Scheme and Systemic 3D-Methodology

Thinking-Activity Scheme
We can understand Thinking-Activity Systems and operate with them by means of Thinking-Activity Scheme (figure 7; an intellectual construction called by "scheme" in MMC is a diagram linked to the certain model as its meaning) where thinking and human activity are represented in the form of different "layers" ("Pure Thinking" and "Thinking-Action"), divided and connected by a "Thinking-Communication" layer. Links between Thinking-Activity layers are mediated by Reflection and Understanding processes (Shchedrovitskii & Kotel'nikov, 1988).
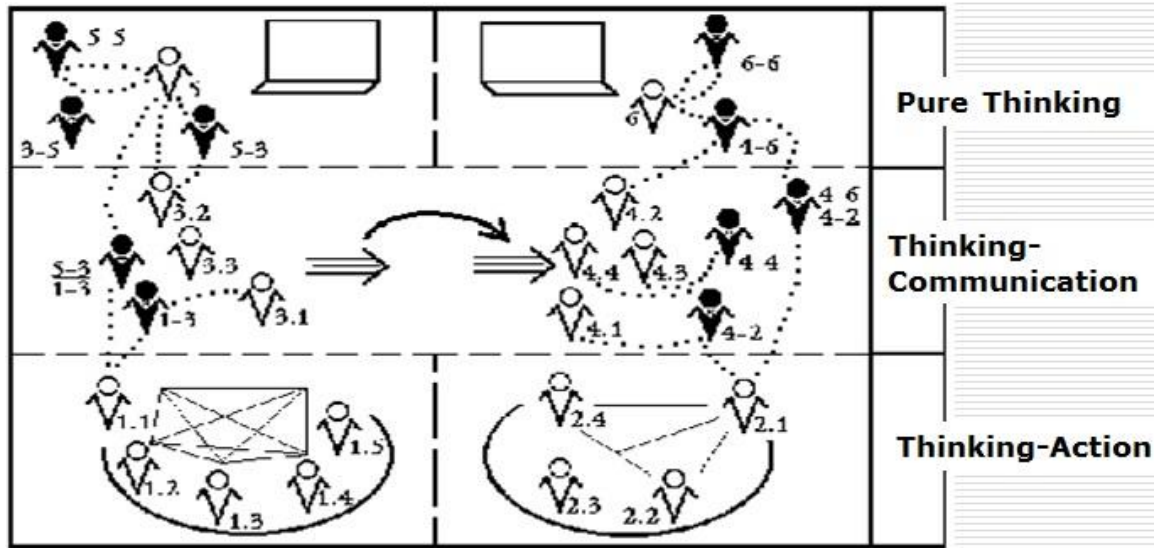
Figure 7. Thinking-Activity Scheme

The Thinking-Activity Scheme is the basic scheme of the System-Thinking-Activity Approach (STA).

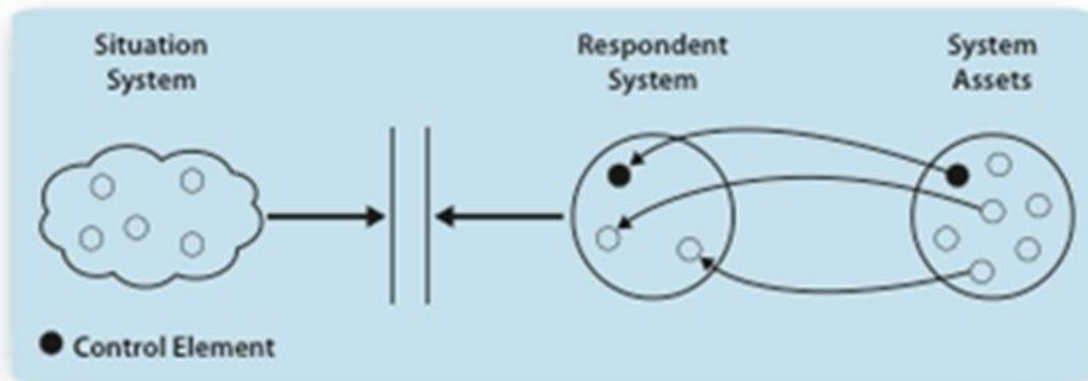*Thinking-Activity Scheme in Comparison with System Coupling Diagram*

Figure 8. System Coupling Diagram

Thinking-Activity Scheme

Discussing systems practices which operate with systemic situations let's compare Thinking-Activity Scheme with System Coupling Diagram by Harold "Bud" Lawson (Lawson, 2010). It is interesting because now System Coupling Diagram (figure 8) is included in the Systems Engineering Body of Knowledge (SEBoK), i.e. is some kind of a standard (SEBoK, 2017).

According to SEBoK Situation System is a problem or opportunity situation, either unplanned or planned; Respondent System is the system created to respond to the situation where the parallel bars indicate that this system interacts with the situation and transforms the situation to a new situation; and System Assets – the sustained assets of an enterprise that are to be utilized in responding to situations.

In the context of our comparison it is important what is System Coupling Diagram in relation to systems thinking and practice and, sense, to Thinking-Activity?

Firstly, Situation System is real situation from practice which perceived by sentient beings of systems thinkers from different positions (systems of interests). There is not any similar situation on the Thinking-Activity Scheme, but it is implied as existing "in the room" or "behind the desk".

Secondly, Respondent System is the Situation System conceptualized by an each systems thinker. It corresponds to the Thinking-Action layer of the Thinking-Activity Scheme.

Thirdly, Systems Assets are systems thinking, the other systemic competences and set of tools which use for conceptualizing the Situation System. It corresponds to the Pure Thinking layer of the Thinking-Activity Scheme.

So what is the main difference between Thinking-Activity Scheme and System Coupling Diagram? Thinking-Activity Scheme has "Thinking-Communication" layer which allows to connect "Pure Thinking" and "Thinking-Action" layers by the means of Reflection and Understanding processes.

System-Thinking-Activity Approach (STA)

Thinking-Activity Scheme in above-mentioned interpretation includes a set of principles for resolving systemic situations. So Thinking-Activity Scheme is the first foundation of System-Thinking-Activity Approach (STA) which allows to organize and provide systems practice on the base of these principles. The other two foundations of STA are:

- systems thinking as a Universal and Developing Methodological Thinking in the framework described above and as a reflexive constructivism which allows to organize Thinking-Activity in a holistic way;

- systemic 3D-Methodology (see further).

A "Thinking-Communication" layer in Thinking-Activity Scheme provides collectiveness of Thinking-Activity and allows to govern it by the means of moderation technologies. We use them in order to apply STA to systemic situations from practice.

Systemic 3D-Methodology

Systemic 3D-Methodology is the principle to think in the space of two "orthogonal" planes:

- Object-Ontological plane with schemes and objects of practical theory located on it;

- Organizational-Activity plane with schemes organizing multi-professional communications and methods, forms and instruments of transdisciplinary thinking.

Thinking-Activity Scheme

Methodological Schemes
Methodological schemes are specific MMC instruments or intellectual constructions which can:

- co-organize Object-Ontological and Organizational-Activity planes of 3D-Methodology as a complete reflexive 3D-space;

- be used as instruments on both planes.

SYSTEM-THINKING-ACTIVITY APPROACH IN PRACTICE

Moderated Communications and Forms of Specific MMC Systems Practices based on Thinking-Activity Scheme

Moderation Technologies
Moderation technologies are considered as the mode of communicative management supporting adhocratic type of interaction and deliberative communication, i.e. the "horizontal" and not-alienating interaction in multi-professional teams providing collectively-distributed thinking and multi-positional organization of resolving systemic situations which bear in themselves complex problems. They can be used in order to organize a communication between stakeholders or government-citizens feedback and partnership.

Practiced Forms of the Organization of Communications Between Stakeholders
For application Moderation Technologies we should distinguish three kinds of forms which are practiced in organizing communications between stakeholders:

- traditional (non-moderated) forms of the organization: negotiations, meetings.

- moderated forms of events organization: seminars, "round tables", etc.

- process forms of workflow organization: project groups, foresight, Organizational-Activity Games (OAG) and similar forms (strategic sessions, staff games), civil jury and other forms of public expertise etc. (these forms are also moderated, but they are more complicated).

Using Thinking-Activity Scheme as the instrument of 3D-Methodology
Using Thinking-Activity Scheme as the instrument of 3D-Methodology with the help of moderation technologies allows to bridge systems thinking and systems practice in moderated forms of events organization (seminars, "round tables", transdisciplinary conferences like ISSS etc.) and in process forms of workflow organization.

Forms of Specific MMC Systems Practice: Methodological Seminar and Organizational-Activity Game
There are two forms of specific MMC systems practice: Methodological Seminar and Organisational-Activity Game (OAG).
Methodological Seminar as a form of collective thinking has developed into a specific MMC systems practice, allowing to consider Systems Situations in the "here-and-now" mode. Step-by-step, having originated as a form of discussions within MMC, Methodological Seminar became a specific form allowing to discuss transdisciplinary problems.

Thinking-Activity Scheme

The systems approach was used and developed in MMC for organizing processes of resolving Systemic Situations with complex problems by multi-professional teams.

Finally, MMC Seminar generated "a new way of organization and a method for developing collective thinking-activity" – OAG (Shchedrovitskii & Kotel'nikov, 1988; Sazonov, 1988).

Organizational-Activity Game (OAG)

OAG was invented by G. P. Shchedrovitsky in 1979. It became a specific MMC technology of work with Large-Scale Systemic Situations (e.g. reforms, etc.) via:

- performance of collectively-distributed thinking, and

- engaging activity of various subject knowledge carriers, operating with them in a mode of the multi-positional and transdisciplinary organization;

Interaction between representatives of different positions was performed not only on the basis of the cooperative organization of activity, but also according to the principles of intellectual communications – "Thinking-Communication", which was considered as the aspect of Thinking-Activity. There are many papers which describe living experience of OAG (Howell, Postalenko and Rabkine, 1995; Rotkirch, A. 1996).

As an intellectual technology OAG could be compared with the Sintegration Method (Ahead of Change, 2016), but there are some difference in conceptual interpretation and technical details (duration, a number of participants, etc.).

Comparison of Configuration and OAG Methods

Methodological Seminar is a form of collective thinking implementing the Configuration Method. Initially the Configuration Method was constructed on the basis of General Activity Theory (GAT) as a "strong" metatheory (it has appeared to create Configurator-Model is possible only due to homogeneous representation thinking as a co-operated activity). But then during methodological seminars work the Configuration Method was re-interpreted in the framework of STA as a "soft" method which support a communication with "the Other".

Vice-versa OAG Method initially meant formation of Thinking-Activity Space in which a free, intelligent and responsible choice of the point of view, the way of action and the form of its discussion is possible. In OAG not only objectives and means, but also values and beliefs can be made problematic. So OAG can be considered as a socio-cultural method.

System-Thinking-Activity Approach and Moderated Communications of Stakeholders: Two Cases from Territory Development Practice

Methodological Principles for Strategic Choice and Moderated Communications of Territory Development Stakeholders

In order to apply STA to systemic situations from practice we should use moderation technologies. Above-mentioned OAG can be considered as a system of moderation technologies.

In this paper we shall consider two cases of systemic situations in territorial development where it needs moderation technologies: clusters formation and public administration modernisation by means of Public-Government Partnership (PGP). But we should begin from the general framework which these cases imply: methodological principles for strategic choice and moderated communications of territory development stakeholders.

Thinking-Activity Scheme

The first of these principles is interdiction for occupation of the "demiurge" position. We should consider strategy creation as a process of competition between various programs and/or projects of future territorial development that are brought into play by multiple stakeholders as "strategic subjects" of development.

The second principle: the only reasonable alternative of a reduction of stakeholder communications to hierarchical structure of interaction is to use both adhocracy and deliberative communications.

The third principle: for overcoming the effect of resistance to the changes we should to add stakeholder communications with the institutional mechanism of development through government-citizens feedback, PGP and interaction with community of advisers, experts, applied researchers.

The fourth principle: in order to launch moderated communication between stakeholders of state programmes or clusters we should expand borders of operated system from regional economy to a complex of socio-economic and political processes of territorial development (figure 9).
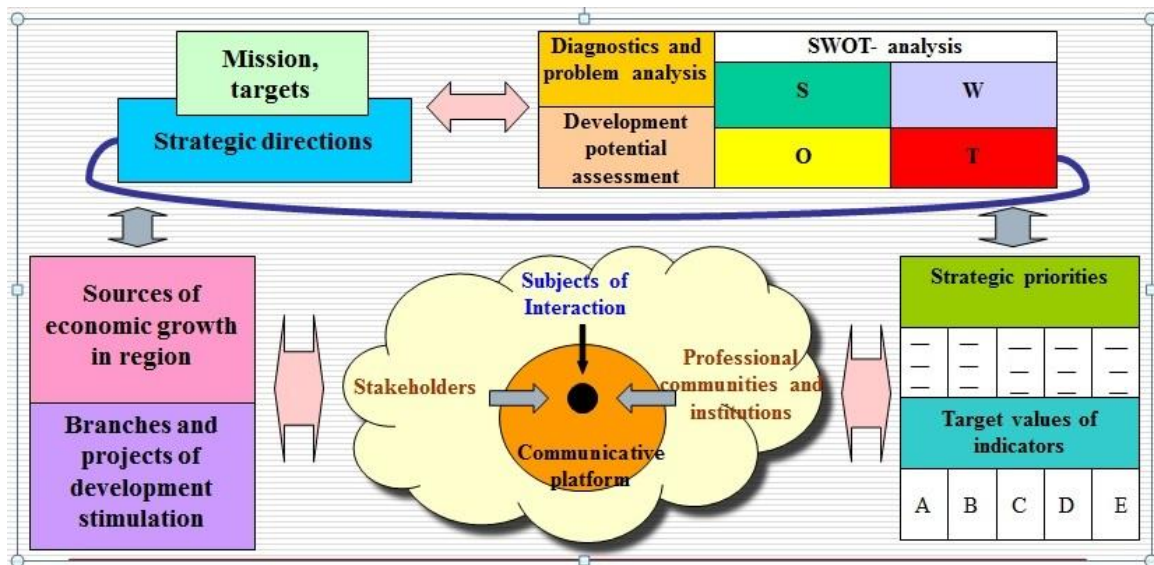
Figure 9. Strategic choice process: stakeholder interaction at identifying strategic priorities of territorial development

Case 1: Formation of Innovative Biopharmaceutical Cluster "AltaiBio" (Altai Region, Russia)

Specific feature of this case is parallel working-out of two documents: Strategy of a social and economic development for the City of Biysk (Altai Region) till 2025 and the similar document for Altai Region as a whole. The result was that the City of Biysk not only has incorporated innovative development into its own Strategy but has also put forward a number of strategic initiatives at the all-region level. It has helped to replace current type of stakeholders relations by the adhocratic style of interactions creating better environment for innovation.

We should stress the key role of moderated communications in success achievement due to launching deliberative communication between regional government, local administration, enterprises, scientific & educational organizations and other stakeholders through two-days strategic session.

Thinking-Activity Scheme

Case 2: Programme of Public Administration Modernisation by Means of PGP
(Khabarovsk Region, Russia)
The main idea of this programme was to launch government-citizens feedback and PGP by using public-political mechanism (including Governor elections) for involvement of stakeholders and communities (professional and citizens) into deliberative communication about strategic priorities of territorial development. The programme was long-term (for political technologies): about 10 month.

Civil jury (as a form of public expertise procedure) was used as a basic moderation technology (more than 30 events). Governor's order to consider some actual problems of territorial development became a mechanism of launching public expertise procedure and actualising feedback through its verdicts (sentences). This mechanism was added with creation of regional development institutions based on PGP.

It has prepared about 20 moderators of civil jury by means of special educational programme. It is interesting to note that a few deputy ministers of regional government have become the best moderators.

CONCLUSIONS

The general framework of MMC as a big project is the Idea of Universal and Developing Methodological Thinking. In systems approach MMC participants were followers of Alexander Bogdanov. And as Bogdanov anticipated Cybernetics by Norbert Wiener and General Systems Theory by Ludwig von Bertalanffy (System-1), MMC participants anticipated Soft Systems Methodology by Charles West Churchman, Russell Ackoff and Peter Checkland (System-2). Now the general framework of Universal and Developing Methodological Thinking is expanding to problem contexts of Emancipatory and Postmodern Systems Thinking (System-3). MMC participants aspire to make Methodological Thinking capable to cover all field of SOSM and to apply instruments of different systems methodologies creatively and critically.

Thinking-Activity Scheme allows MMC followers to build a communication bridge between systems thinking and systems practice. This scheme includes a set of principles for resolving Systemic Situations with complex, "wicked" problems by multi-professional teams.

Considered cases confirm practical use of OAG and similar methods exploiting moderated communication between stakeholders in very different situations. Now these methods based on STA and Thinking-Activity Scheme are implemented in consulting, education, city and regional development, public policy, public expertise procedures, organizing of public-political communications, conflict resolving and mediation procedures. In future it will be useful in international relations, cross-cultural interactions, global problems resolving, etc.

In 2014 Bloomsbury Publishing has issued "a comprehensive guide for business people, government administrators and specialists in management methodology" titled "Methodological School of Management" (Methodological School, 2014). Writing by a few MMC followers this book was shortlisted for the CMI Management Book of the Year award, because it "offers solutions for resolving tricky managerial situations and achieving organisational targets", Bloomsbury Publishing said (Bloomsbury, 2014).

A number of papers by participants of MMC and Methodological Movement you can read at the following addresses:

- papers by G. P. Shchedrovitsky and the other MMC participants in Russian: http://www.fondgp.ru

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- papers by G. P. Shchedrovitsky in English: http://www.fondgp.org/gp/biblio/#biblioeng

- papers by the other authors in English: http://www.fondgp.org/library/int

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