

Critically Generated Knowledge - the Triple Loop Learning Result

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In contemporary circumstances, one of the key features of managing the organizations is the increasing complexity and heterogeneity of problems which are relevant for the organizations' survival and development. At the same time, there is an increasing diversity and variety of theories, methodologies, methods, techniques, and models that are available for dealing with the management problem situations. Diversity Management, as a complementarist meta-theoretical development within critical systems thinking, seeks to provide an appropriate base of guidelines for making theoretically and methodologically informed and responsible choices. Triple Loop Learning, as a methodological development of Diversity Management, is focused on simultaneous and creative management of three main organizational issues: design, debate, and power and legitimacy. Relevant insights into the management problem situation under consideration, in which one wants to intervene, can be critically generated through the triple loop learning process. An appropriate improvement in the problem situation can be achieved through the theoretically and methodologically underpinned management of design, debate, and power-knowledge dynamics, i.e. through the implementation of the critically generated knowledge.

Keywords: management problem situations in organizations, critical systems thinking, Diversity Management, Triple Loop Learning, knowledge for meaningful and responsible choices

1. Introduction

The increasing diversity of issues, problems, and problem situations - that are characterized by great complexity, dynamics, interactivity, and ambiguity - represents a relevant feature of managing the organizations in contemporary circumstances. At the same time, the existence of the increasing diversity and variety of models, techniques, methods, methodologies, and theories - available for scientifically grounded and practically useful dealing with these issues, problems, problem situations, and dilemmas related to them - is of paramount importance.

As a complementarist meta-theoretical development of the contemporary critical systems thinking, *Diversity Management* seeks to provide a suitable base of guidelines for making the conceived and responsible choices in organizations. *Triple Loop Learning* is a methodological development of Diversity Management. The triple loop learning process is focused on simultaneous and creative research into the three important issues concerning: a) a design of the organization's management problem domain - *How?*, b) a debate between the participants in the problem situation about the ends and means of their achieving - *What?*, and c) a power relationship within the organization's problem situation, and a legitimacy of the proposed solutions for the problems - *Why?*

Triple loop learning is preliminarily seen as an appropriate development of single loop learning and double loop learning. Single loop learning can be developed into three relevant types of learning; each of them is underpinned by the suitable theoretical-methodological, and applicative approaches. Scientifically based and practically valid knowledge, as a foundation for making purposeful and accountable choices in organizations, should be critically generated in the triple loop learning processes. A corresponding improvement of the organization's problem area can be achieved through implementation of the broadened and deepened knowledge about the management problem situation, acquired in the learning process.

2. The complementarist meta-theoretical foundations of triple loop learning

Diversity Management (DM) represents a complementarist meta-theoretical development of the contemporary critical systems thinking [3; 4, pp. 308-312; 9, p. 145]. DM has been preliminarily focused on managing the increasing diversity of issues, problems, and problem situations, with which managers are confronted, by means of the increasing diversity of types of models, techniques, methods, methodologies, and theories. However, the diversity *per se* generates a new key issue that has to be managed: How to choose between the available models, techniques, methods, methodologies, and theories? Therefore, in DM, the emphasis is on the management of the increasing diversity of theories, methodologies, methods, techniques, and models, thereby it can contribute to the enhancement of management of the increasing complexity and diversity of issues, problems, and problem situations in organizations. That is, in DM, the two crucial concepts - diversity and management - possess the precisely determined meanings: *diversity* - creative managing of organizational issues, problems, and problem situations requires to make more choices being available; *management* - the choices have to be carefully thought-out and responsibly made.

According to the basic idea of Diversity Management, there is no argument released from the *dilemmas*. The existence of the dilemmas in solutions of any theoretical-methodological argumentation is also true for the complementarist¹ assertions. However, the complementarist argumentation strength is in the increasing awareness of the existence of dilemmas, so these dilemmas can be carefully explored, not ignored, or avoided.

A mentality of *tolerance*, i.e. a way of thinking in which the permissibility, scrupulosity, and tolerance have a crucial role, is, first of all, relevant to the Diversity management of the theoretical approaches. Besides, tolerance has to be complemented with an appropriate *meta-theory* that is responsible for making choices on the level of methodological practice. In this context, tolerance means a comparison between the *theories* through some form of argumentation. When a *methodological* choice has been made by the researchers, it is vitally important that they adhere the theoretical notion that embodies directly a certain *action*. A theoretical sensitivity - that implies a meaningful re-evaluation of the favoured notions, and an interpretation of the gathered information from the different perspectives - is built into the researchers through a recognition of the constructed character of the theoretical statements. Since the acquired insights do not imply a direct translatability of the available information between the considered theories' languages, the researchers have to *circle* between the alternative visions in order to gather the new information, and recognize it as different. The details of any theoretical vision selected for a particular purpose of intervention have been made explicit through the required knowledge. The practitioners are therefore able to make choices, and to accept responsibly the consequences of the selected actions. For giving the answer to the question: How can a theory lead to an intelligent and accountable choice, it is significant that the decisions on the requirements for the different knowledge should be made from the viewpoints of the theories' implications for practice. Both theory and practice can be strengthened through maintaining the *dialectical* link between theory and practice [11, p. S13]; in the given context, it means that judging about a theoretical vision is connected with judging about the actions that are defensible.

The following dilemma is particularly significant for the framework of this consideration: How can the researchers' choices be justified, when it is recognized that the standards for making the choices differ? For example, in *Organizational Cybernetics*, the standards are connected with a purposeful design and organization, in the *Systemic Interpretivism* methodologies, the standards are related to enabling the participants' adaptation in the problem situation through the debate process, and for the *Critical Systems Modernism* methodologies, the normative standards for measuring the extent to which the dominant forces shape the stakeholders' debate are required. The necessity of determining a basis for judgement results from the evident fluidity of the criteria for judging. DM has to provide a *basis* of guidelines for creative *choice making*.

According to DM, it is argued that a *critique* and *self-critique* [6, pp. 868-878; 7, pp. 208-210; 8, p. 77] can lead to a certain quality of making choices, avoiding relativism and absolutism. In DM, a theoretical, i.e. methodological choice represents a post-critical turning point, when the decisions can be made taking into

¹ Complementarism can be determined as an endeavour to preserve diversity in different spheres of thinking and acting. The stakeholders' opportunities for reasonable and responsible managing the most demanding problem situations in organizations are improved by the diversity preservation.

account the critique's results. The aims - which are judged as valuable to be pursued - are selected. The incompleteness of assessment suggests that all judgements are fragile, and arguments used to defend the judgements are never simple. The influences of power, that is built into knowledge and decisions focused on action, are relevant for making the choices.

An awareness of theoretical and methodological work, if it is treated with a sensitivity to the dilemmas, represents the first step towards the guidelines for a better making choices, and, therefore, for diversity management. As a result, a conceptual framework, in which the system's aims - classified according to a particular theory, methodology, or model - can be valued, is provided. This helps the stakeholders to consider the relevance of the different aims and the way in which the aims can be aligned. The choices will be a matter of judgement, but their defence relies on a broader conceptual framework that arranges the aims - one in relation to another.

3. Triple loop learning

Diversity management, as a complementarist meta-theory of critical systems thinking, is *methodologically* developed within *Triple Loop Learning* (TLL) [3; 4, pp. 312-317; 9, p. 145]. A key purpose of Triple loop learning is to acquire the relevant *knowledge* about diverse, complex, and ambiguous management problem situations in organizations. These insights and findings - critically generated through the Triple loop learning process - should support the process of *creative management* of the increasing diversity of issues, problems, problem situations, (and dilemmas related to them), important to the organizations' development. Therefore, TLL is committed to uncover the theoretically and methodologically grounded, and valuable ways of a conceived and responsible managing the diverse problems of the organizations' functioning in contemporary circumstances. Triple loop learning should be seen as an appropriate development of *single* loop learning, and *double* loop learning.

Single loop learning

Single loop learning can be determined as *end-means* thinking. Since the ends have been set, it is the search for the best means of their achieving. A general question in the single loop learning process can be posed in the following way: *How* should we act in order to best accomplish the set ends? There are no other definitions of the ends, or they are unknown. Those who learn through single loop are focused on finding the best means of achieving the defined objectives and goals. In other words, those who learn through single loop are oriented to the task, i.e. they are exclusively concentrated on identifying the best tools, ways, resources for accomplishing the ends. An identification of the ends and means of achieving these ends is not regarded as problematic.

The *three* relevant *types* can be identified within single loop learning; each of them represents a particular, exclusive use of one of the three possible loops - Figure 1. The three main types of *single* loop learning.

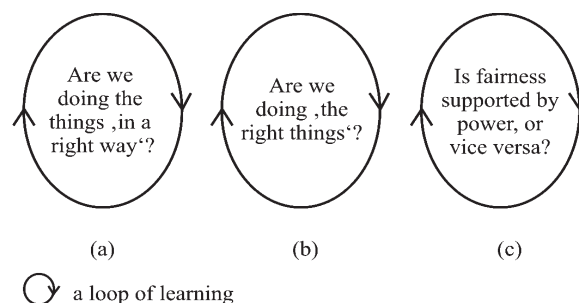


Figure 1. The three main types of *single* loop learning

The first type of single loop learning is a most widely comprehended learning about the *process's* design and the *organizational* design - Figure 1.(a). In case of the *process's* design, the subject of consideration includes the approaches focused on processes, such as Business Process Reengineering. The next question is in the center of learning: Are we doing the things *in the right way*? That is, the key question is:

How should we do these things? In such circumstances, the means imply a search for some radically improved set of processes of achieving the defined aim, measured in terms of *efficiency*. On the other hand, in a case of the *organizational* design, the ends are included in the models; these models have to offer the most effective rules of organizational design, and the means imply a search for the implementation principles in order to generate a suitable way of accomplishing the set ends.

Within the *structuralist* paradigm, an organization can be holistically diagnosed and (re)designed by the use of the appropriate *Viable Systems Model (VSM)*² - Figure 2. The Conceptual framework of *Viable Systems Model*; this is of significance for learning about organizational design, and creative managing the design.

In VSM, as a methodological tool of *Organizational Cybernetics*, organizations are understood as complex, dynamic, and open systems. Organizations are capable of responding adequately to the stimuli that were not anticipated during the process of their designing; thus, they can oppose to the *internal* interruptions and errors, and can adapt continually to the changeable *environment's* actions. Relying on experience, organizations, as viable systems, can learn what their sustainable response to the relevant influences from the system and its environment is. At the same time, organizations can sustain themselves over the long term only by means of the appropriate two-way relationships with their environments, from which they obtain and to whom they give the information relevant for their survival. Besides, organizations are characterized by the existence of purposeful, relatively *independent*, and dynamic segments, whose interactions have to be appropriate to the aims of the system as a whole. Through promoting a creative thinking about organizations, VSM includes and organizes the following three significant entities: a) the *operational elements* - the organization's components dealing with implementation; b) *meta-system* composed of the four management functions: *coordination* (dealing with the short-term problems in the system's operational elements); *control* (maintaining the internal stability of the system); *intelligence* (gathering the relevant information about the strengths and weaknesses of the system's process, and options and threats of the external environment); *identity* (developing the system's policy); c) *environment* (the local environments of each operational element and a future environment for making the developmental decisions).

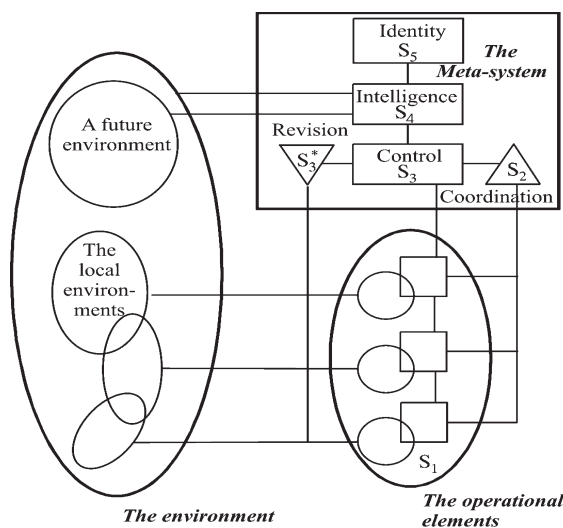


Figure 2. The Conceptual framework of *Viable Systems Model*

Shortcomings and errors - in relation to the ends of the organization as a system - of a proposed systemic design, or a real organization, should be uncovered within the VSM's use, through *identifying* and *diagnosing* the system. A tool for dealing with the problem of designing an effective organization is provided by means of diagnosis and the resulting *redesign* of the system. VSM helps *continual learning* and improving the

² A broader insight into the theoretical foundations, methodological development, and using of the VSM is provided, for example, in: [1; 10, pp. 387-410].

organization; also, VSM provides the management entities with a variety that is necessary for effective and efficient management of the organization. At the same time, VSM does not deal in an appropriate manner with the important issues of the social processes, culture, and power in organizations. As in the other tools of this single loop learning type, a previously set aim has been taken over and pursued, control is delegated on the organization's parts, who are the only ones allowed to develop the alternative ways for achieving the aim.

The second type of single loop learning represents a most widely grasped learning about the processes of *debates*, i.e. the discussions, through which the organizations' ends should be set - Figure 1.(b). A certain kind of *interpretive* intervention in organizations is the relevant subject matter in this single loop learning type. This interpretive-grounded intervention in the management problem areas should be considered as a theoretical, methodological, and applicative response to an obsession of the first type of single loop learning with finding and implementing the structuralist solutions. In fact, the debates - necessary for setting the organization's ends - between the participants are prevented in the first type of single loop learning.

In the second type of single loop learning - through *interpretivism*, as the relevant scientific paradigm - setting the ends and determining the means of their achieving are considered as problematic. This is because in each organization in contemporary circumstances there are many different stakeholders with, as a rule, various interests, value systems, ends and means of their achievement, different participation in formulating the problems and finding their solutions, different participation in making the decisions and their implementation, different power. There is a following key question in the centre of this single loop learning type: Are we doing the *right things?*, i.e. *What* should we do? As the first type, this type of single loop learning is also oriented towards the task - now: the task of setting the ends and achieving them by the appropriate means. In relation to the first type of single loop learning, the *different* ends and means of their achieving are determined: The ends become the appropriate *reconciliations* between the participants in a debate on the preferred results of the organization's functioning. *Participative, open, and free* debate between the participants in a problem situation, which is the research subject and in which one wants to intervene in order to improve it, becomes an adequate mean of achieving the aim of learning, that has been set in such a manner. An intervention in the organization's problem area represents a *participative* process; in this process, the designs for organizing processes, and the arrangements for structuring are discussed from different points of view, through the debate between the participants, and enriched by an interpretive thinking about relevant dimensions of organisations as cultural phenomena. Despite the undoubted breakthrough from the viewpoint of the resulting insights and knowledge important to managing the problem situations in organizations, the whole process, however, as in the first type of single loop learning, is under the domination of an exclusive focus on the redefined ends, and means of their achievement.

As a theoretical-methodological support to the interpretive-grounded single loop learning, there are the methodologies belonging to the *hermeneutic* paradigm of systems thinking³ - *Soft Systems Methodology* (Checkland, P.B.), *Interactive Planning* (Ackoff, R.L.), *Strategic Assumption Surfacing and Testing* (Masson, R.O., Mitroff, I.I.), *Robustness Analysis* (Rosenhaed, J.), *Strategic Options Development and Analysis* (Eden, C.).

Soft Systems Methodology (SSM)⁴ can underpin the interpretive learning about the complex-pluralist problems in organizations, in a scientifically founded and practically useful way - Figure 3. The Process of *Soft Systems Methodology*. SSM deals with those management problems that - besides the complexity of the structure and processes - are characterized by the relatively autonomous participants, with different interpretations of the problem areas in organizations. This important variety of the viewpoints and interpretations should be developed and explored, particularly in the context of determining the common ends and means for intervention in the organization. In addition, within SSM, the concept of the system is used as an *epistemological* tool, i.e. as a tool for organizing and transferring the ideas and thinking about organizations and their problems. The four key principles are built into the SSM basis: a) *learning* - a continual process of defining the different ways of moving through the problem situation, with regard to: relevance (for those included into the situation), cultural feasibility (the restrictions that have to be respected) and systemic desirability (holistic thinking must not be undermined); b) *culture* - the organizational and/or

³ The interpretive systems methodologies have been developed, for example, in: [5; 10; 12].

⁴ The key theoretical, methodological, and applicative features of *Soft Systems Methodology* can be found out, for example, in: [2; 5, pp. 181-210; 10, pp. 486-506; 12]

social limitations whose changes have to be met through interventions; c) *participation* - in the exploration and intervention - of those who are included into the problem situation, has to be guaranteed; d) *the two ways of thinking* - an abstract systemic thinking and thinking about the reality associated with specific contexts. SSM represents a *learning system* that employs the ideas about the systems in formulating the basic mental procedures - observation, assertion, comparison, and deciding on action.

Through the following seven phases, SSM includes: 1) *uncovering*, i.e. exploring the *problem situation* (The stakeholders, along with the problem situation's structure, its processes, and the resulting 'milieu', should be identified.); 2) *expressing the problem situation* (The identified key issues, conflicts, problem features of the situation are encompassed within so called *rich pictures*.); 3) *formulating the so called root definitions* of the extracted sets of the relevant systems for the conceived action (It is necessary to specify: What should be done, and why, who should do that, who should benefit, i.e. suffer damage from the activity, what are the restrictions on the given actions imposed by the environment.); 4) *constructing the conceptual models* of the systems specified within the root definitions (these models represent the means of understanding of the reality, and initiating the discussion, whose results have to be the changes towards improving the situation.); 5) *comparing the models with the real-world actions* (the structure and substance of an organized debate about improving the problem situation are provided through this methodology phase.); 6) *determining the systemically desirable and culturally feasible changes* in the problem situation through a coherent debate; 7) *taking action* in order to improve the problem situation (an effective and efficient implementation of the determined desirable and feasible changes in the problem area with the aim of its enhancing).

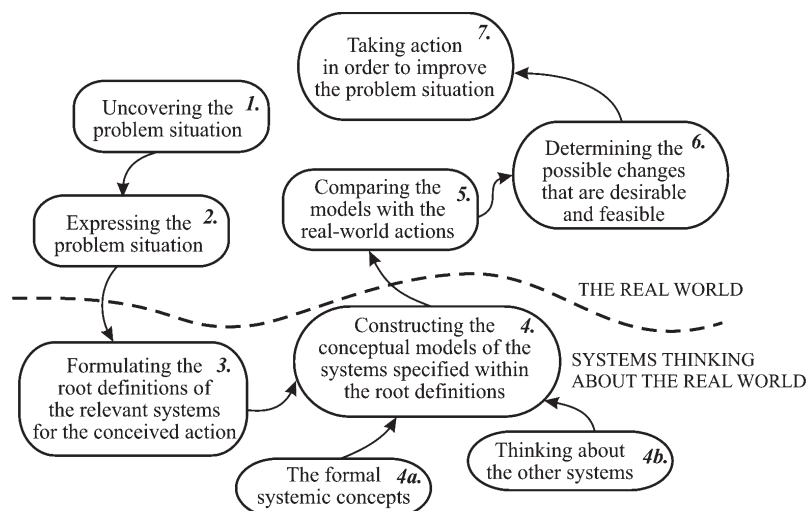


Figure 3. The Process of Soft Systems Methodology

SSM helps the process of generating a mutual understanding between the participants in the management problem situations. On the other hand, due to the constraints of the interpretive theory built into SSM, SSM does not include the organizations' interest in prediction and control, and does not pay the necessary attention to the achievement of the participative decision-making released from the influences of the power relationships, and coercion.

The third type of single loop learning is focused on the *power-knowledge dynamics* - Figure 1.(c). A corresponding subject area can be determined as an impartial practice for the participants involved in the problem situations, in which it is intended to intervene. This type of single loop learning represents a reaction to an exclusive focus of the first and second types of single loop learning on an intervention based on design and debate, respectively. That is, determining the ends and means in the learning centre of the type *How?* is considered as problematic, because of an implicit risk of producing the results that are unfair - if not for many participants, then - for some participants in the problem situation. At the same time, the tools of a debate in the learning centre of the type *What?* are regarded as problematic, because the debate about the desirable states and means of their achieving has been distorted by means of the influences of *coercion*; it means that the debate in the problem situation is not open, free, and participative, i.e. is not fair for those over whom a coercion is applied in the organization.

A new center of learning with the following central question is developed within the third type of single loop learning: Is fairness supported by power or vice versa?

The key question in this single loop learning type is: *Why* should we do it?, or *Why* should we fight to preserve/protect a power-rightness arena from the debates, when such a debate enables a research into the power-knowledge configurations in the system. Although the question *Why?* is fundamentally different from the questions characterising the learning centres of the types *How?* and *What*, this question is still focused on the task of achieving the ends through the appropriate means. *Different* ends are set and different means are determined within the third type of single loop learning. Now, the ends are expressed as the forms of an impartial practice, and the means represent the ways in which this fair, i.e. fairer practice can be realized. A learning process is under the domination of an exclusive focus on the set ends and the means corresponding to these ends.

Within the theoretical, methodological, and applicative approaches supporting the first and second types of single loop learning, these ends and means are regarded as problematical. The forms of an impartial practice, treated as the ends, and the ways in which such practice can be realized are not considered as scientifically based, but as ideological. It is believed that the processes of generating the knowledge are underestimated due to the focus on understanding of the power-knowledge relationships. Therefore, the assertion of the third type of single loop learning - that a judgement about quality of any knowledge or learning can become impossible because of the influences of coercion - is regarded as ideological. However, the proponents of the third type of single loop learning argue the opposite: according to them, ideology appears exactly because the people fail to problematize the relevant power-knowledge connections.

The *Critical Systems Heuristics* (CSH)⁵ methodology can support learning about the power-knowledge dynamics in organizations, in a scientifically grounded and practically useful way. As an *emancipatory* development within the *critical* systems thinking paradigm, CSH deals with the management problems that are characterised by the coercion, and in which the power sources can be relatively easily identified. Relying on the appropriate philosophical foundations, CSH seeks to develop a methodology that can be used by the organization's stakeholders in order to reveal a normative content of the functioning design and/or the proposed design of the system. In doing so, the normative content of the organization's design involves the *value* assumptions built into the design and the consequences of the design's implementation for those affected by the design. Within the practical reasoning, the appropriate paradigm of the conceived systems is developed; the design creators can employ this paradigm in order to think critically about the existing designs and to identify the possible alternative designs; on the other hand, the procedures for critical challenging the systemic rationality of the system's designers are developed for those who have to function in/with the respective design. Within CSH, the purpose of systems thinking and learning is to shape scientifically the system's design, in order to ensure improving the stakeholders' position. The *epistemological* position of CSH points to an endeavour to expand science and rationality also on the ends. In searching for the knowledge and rational action, the assumptions built into the judgements are *critically* reassessed; *'systemic'* indicates the necessity of critical thinking about the undoubted lack of comprehensiveness and objectivity of all designs of social systems; *heuristics* implies providing a suitable method for continual reassessment of the assumptions built into the designs, and their unquestionable incompleteness. There are twelve critically heuristic categories that are vitally important for the CSH-methodology development, and its employment in the process of generating the knowledge; these categories make a clear distinction between: those *who are involved* - a client, a decision maker, a planner, i.e. a designer, and those *who are affected*, but who are not involved in the processes of building the system's design, and deciding - so called witnesses. The developed system should generate the knowledge that is important for the ends, and encourage the debate about the ends; at the same time, all proposals for the design of the explored management problem domain should be critically assessed in the categories of the normative design.

The following three questions can be considered as decisively important: a) *What can one find out?* (the endeavours to map the organizational reality and construct the adequate designs of such systems are characterized by the undoubted deficiency of comprehensiveness.); b) *What may one do?* (the values embedded in the designs, and the moral deficiencies of the designs have to be explored.); c) *What may a*

⁵ The philosophical foundations, methodological development, the ways of employing the Critical Systems Heuristics have been presented, for example, in: [13; 10, pp. 525-538].

participant in the problem situation *expect?* (there is no absolute guarantee that exploring, i.e. designing the problem situation and implementing the design will result in improving the situation and the participants' position in it.). A practical tool that can be used by the stakeholders in order to commit the designers to a rational debate about the incompleteness of their designs represents a special part of the methodology. It is about a polemical using the *boundary judgements* about what it is important for the management problem domain, and consequently has to be included into the process of research and learning, as well as, what it is less important or irrelevant, and therefore can/may be excluded from the process of consideration. The twelve boundary questions specified in two different contexts - the 'is' manner and the 'should be' manner - are simultaneously posed and considered in the process of uncovering a normative content of the system's design. In doing so, the questions concerning: the *clients* - talk about the *value* basis of the design, the *decision makers* - indicate the *power* base, the *designers* - testify about the basis of *expertise*, the *witnesses* - point to the basis of the design's *legitimacy*. CSH is aimed at: a) learning about the problem situations and their designs, and b) freeing of the power relations; as a result, CSH provides a heuristic support to identifying, testing and enhancing the normative content of the social systems' designs. CSH uncovers the interests to which the proposed design serves, and contributes to organizing a rational debate about the deficiencies of the design. In addition, CSH does not deal with the problem situations characterised by subtle and complex use of the power.

Double loop learning

An existence of the three different centres of single loop learning results in numerous conflicts concerning the issue of which of these centres is the most appropriate to the management problem area, and which, therefore, should be chosen. Each type of single loop learning seeks to attract the researchers by demonstrating its own superiority in resolving the issues and dilemmas appearing within the other two types of single loop learning.

An appropriate *reconciliation* between the first and the second types can be seen as a particular attempt to overcome the concerned conflict. This reconciliation is the most probable because the first centre and the second centre find that the intervention resulting from the third type of learning is ideological and unscientific, and, therefore, it can be challenged. This reconciliation between the learning type *How* and the learning type *What* represents double loop learning - Figure 4. *Double loop learning*. Double loop learning strives to bring into interaction the learning centres that include the practices of debates and designs by posing and considering the two key questions: *Are we doing the right things?* and *Are we doing the things in a right way?* *What* and *How* learning centres, which explain these two questions, respectively, without an emphasis on the nature of intervention focused on the task, ought to be protected by double loop learning. An intervention is developed in a suitably conceived direction, accepting the problem of choice between the two centres, and tackling this problem in any moment of the problem situation's exploration that should be enhanced through that intervention.

The new relevant insights, i.e. the broadened and

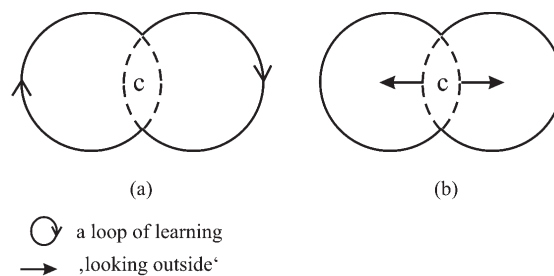


Figure 4. *Double loop learning*.

deepened knowledge about the problem area in the organization are generated through the process in which the researchers/practitioners *circulate* between the two learning centres. That is, there is a certain - albeit limited - *complementarism* of perceptions of the problem situation simultaneously from the two important aspects: a) the *pluralist relationships between the participants* in the problem situation, implying that an appropriate compromise - on the preferred ends and the ways of intervening in the situation - has to be reached between them, and b) the *complexity* of the situation, that has to be designed in a suitable

manner. The appropriate theoretical-methodological and applicative developments can support a simultaneous exploring of these two important dimensions of organizational functioning, and learning about them through the two centres of the types What and How; namely, a) a particular methodology belonging to the interpretive scientific paradigm, for example, Soft Systems Methodology, as a *dominant*, and b) a corresponding methodology belonging to the functionalist-structuralist scientific paradigm, for example, the methodology of Organizational Cybernetics, as a *supportive*, are chosen and implemented.

The concerned choices of the methodologies (and their associated methods, techniques, and models), and their implementation in structuring the problem situations allow for the researchers to simultaneously deal with the relevant issues of *effectiveness* and *efficiency* of the organizations' functioning, in a scientifically grounded, practically useful and responsible way. In other words, an appropriately conceived and performed management of the debate between the stakeholders about *what* should be done, and *how* the changes should be implemented in order to achieve a desirable enhancement of the problem situation in the organization has been enabled.

Those who learn through double loop can fall into a less thought-out awareness. The researchers - and their knowledge about the problem situation - can be stuck in a *central* position, 'looking outside' - Figure 4.(b) instead of circulating between the centres of types What? and How? It is about a *double* or a *blurred* vision. In the case of a *double* vision, the researchers still receive the information from the two learning centres, but they do not try to manage the vision; rather, they act in accordance with the ends and means of their preferred loop, and, in doing so, they change the nature of the other loop. In the conditions of the double vision, there is no readiness to think about the premises embedded in the preferred loop. In the case of a *blurred* vision, there is a particular, eclectic awareness. The practitioners seek to achieve any ends they meet, continuing to use the means that are immediately available to them; the practitioners follow the direction which is well-established and does not imply careful thinking about the details of the situation.

Triple loop learning

An establishment of tolerance between all three centres of learning and, as a result, a preservation of a variety should be enabled in the process of triple loop learning - Figure 5. *Triple* loop learning.

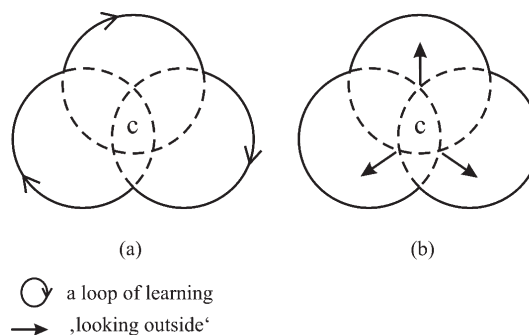


Figure 5. Triple loop learning

Within triple loop learning, the three relevant questions: Are we doing the things in a right way?, Are we doing the right things?, and Is fairness supported by power, or is power underpinned by fairness? strive to be integrated in an appropriate *holistic* knowledge, i.e. in a systemic knowledge about the management problem area. An intervention is not longer oriented to a task because the How?, What? and Why? centres of learning - which have been supported by these three questions - are entering the consideration in any moment as a base for: a) producing the valid *knowledge* and b) making the accountable *choices*. There is a new thought-out awareness, since the researchers circulate continually between the three specified questions - Figure 5.(a).

Through the concerned circulation, the stakeholders of the problem situation can develop an appropriate debate for each learning centre: a *structuralist* debate for the How? learning centre, an *interpretive* debate for the What? centre, and an *emancipatory* debate for the Why? learning centre. In doing so, a *critical*

production of the deepened and broadened knowledge about the problem area in the organization, that should be improved is enabled. Those who learn through a triple loop connect the three centres of learning into the appropriate triple loop, and simultaneously explore the relevant dimensions of design, debate, and power-knowledge relationships. The resulting overall knowledge is more than the sum of parts that make it. It is about an appropriate *systemic complementarism* which enables the stakeholders involved in the situation, as well as those affected by the found and implemented solution, to critically manage the power-knowledge relationships, debate, and design.

Those who learn through triple loop are able to consider the extent to which the *different methodologies* correspond to the different types of ends: How?, What? and Why? that are identified as decisively important for an intervention. That is, they are capable of interpreting the methodological principles and the associated operational procedures, in a manner that helps them discuss the selected purpose. Thus, the knowledge about the methodological options, that can be included into exploring and making choices, is relevant to the choice and managing the purpose. Triple loop learning enables the researchers/managers/practitioners to holistically manage the *diversity of methodologies, methods, techniques, and models* for the three learning centres, and, in turn, to purposefully improve management of the *diversity of issues, problems, problem situations, and related dilemmas*, that are relevant to the organization. In its basis, triple loop learning represents making a choice about the ends that should be achieved in certain *circumstances*. Also, through the triple circulation, the researchers/practitioners are encouraged to explore the possible principles and processes of action in certain circumstances. The researchers become familiar with a diversity of possible courses of action for the selected purpose. Thus, the methodological courses of action are *locally* developed and implemented, in accordance with the specificities of the respective problem situation.

As in double loop learning, those who learn through a triple loop can fall in a less thought-out awareness; i.e. they can '*get stuck in the center, looking outside*'. As a result, a circulation between the three learning centres either stops or does not start - Figure 5.(b). An uncritical pursuing a preferred vision, or an unproductive eclecticism, when the monotonous, dominant and repetitive patterns have been chosen and implemented represent an inappropriate solution for a triple vision, or the circumstances with much confusion.

Conclusion

Within the process of triple loop learning, a critical production of the relevant insights and knowledge about the important dimensions of the management problem situations in organizations implies a development of the appropriate discourses - structuralist, interpretive, emancipatory, i.e. critically systemic - for each How?, What?, and Why? learning centre. A creative management of the design, debate, and power-knowledge dynamics can be provided by means of implementation of the resulting - deepened and broadened - knowledge about the considered problem area in the organization.

Relying on Diversity Management, as a complementarist meta-theoretical development of critical systems thinking, triple loop learning indicates: a) the relevance of awareness about the complexity of the process of knowledge construction, b) the importance of not-obsession with the particular theories, methodologies, methods, techniques, and models, that can be employed in the processes of managing the problem situations, c) the possibility and desirability of action in the management problem situations without a pre-selected and exclusive focus on a particular learning loop. Triple loop learning helps the practitioners explore the principles and the processes of action in certain circumstances, to continually take care about the purpose to which they tend, not to act through a pre-selected learning loop in all management problem situations.

In particular, triple loop learning helps the practitioners who are characterized by an eclecticism, which is inappropriate to grounded and accountable management of the complex and ambiguous problem situations in organizations. Within an intervention that relies on the knowledge critically generated in the triple loop learning process, the focus is on a *local* - in the temporal and the spatial sense - improvement of the explored management problem area in the organization.

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