

ORGANIZATIONAL CREATIVITY AS A PREREQUISITE FOR THE GENERATION OF INNOVATION

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ABSTRACT

The main question behind this paper is how to support the creation of ideas at an individual and organizational level. In order to organize this complex system, the “Planetary Model” is introduced. Different to most other models used for explaining creative processes, this model takes into account the dynamic interaction within complex real-life processes. By combining this model with the various single stages of a sequential innovation process that can easily be translated into specific working steps, the project related performance can be improved by simultaneously providing for positive organizational effects in the long run, probably also leading to sustainable innovation.

INTRODUCTION

Creativity is a prerequisite for the generation of innovation and is even of increasing interest when moving from incremental to radical innovation [2]. Firstly, the role of creativity for innovation is briefly presented. Secondly, the various organizational forms of creativity [3] are introduced. In order to understand the complexity of creative problem-solving, the Planetary Model is introduced in a next step in order to point out determining as well as influencing factors of creative problem-solving processes. The application of the Planetary Model within the innovation process will finalize this contribution.

ORGANIZATIONAL LEVELS OF CREATIVITY

First, in order to generate creative solutions for complex systems, a more holistic system’s view is required instead of specializing on ever smaller system’s units. Authors such as Probst, Raub, and Romhardt [6, p. 187] stress that complex problems cannot be solved by mono-causal thinking within linear cause-effect relations, but instead require holistic systems thinking or a socio-cybernetics point of view [10][4][5]. Additionally, besides rational and convergent thinking the dynamics of such systems with permanently changing patterns requires the development of new and creative approaches for solving these complex problems with an extension to teamwork, organizational, and inter-organizational problem-solving processes.

In order to enhance the overall creative abilities within a system it seems necessary to enlarge the view of the creative individual by also taking into account the various organizational levels of creativity [1]. Those can be divided into individual creativity, group creativity, organizational creativity, and inter-organizational creativity. By focussing on an individual, the creative performance can be understood as a function of attention (A), intrinsic motivation (Mi), time (T), and knowledge (K) (see equation (1)) [8].

$$CP(\text{Ind.})= f(A, Mi, T, K) \quad (1)$$

By going a step further, within a collaborative problem-solving process such as a group or an organization, the overall creativity is much harder to determine, since it cannot be assumed that this is just the sum of the single individual performances, but instead synergies might allow creative solutions to emerge that are the result of associative thinking among different people with different backgrounds, different experiences, different value systems, and different expectations [8]. As a consequence, the crucial roles of a common and “understandable” language, complementary value systems and personality profiles, and clearly defined competences become obvious. This is especially true because of the sensitivity of most creative problem-solving processes.

THE PLANETARY MODEL: A FRAMEWORK FOR DEALING WITH CREATIVITY

The Planetary Model can roughly be divided into three dimensions: In the middle of the Planetary Model there is the sun, standing for the solutions and ideas generated within the problem-solving process. Whereas both solutions and ideas are outcomes of the creative problem-solving process, solutions are directly connected to a certain problem and an idea has no obvious relation to the problem one was working on. The sun is surrounded by the planets, which stand for the various phases of the creative problem-solving process. The sun and all the planets are embedded within cosmic clouds, standing for the needed thinking styles and competences, as well as the innovative climate together (see figure 1).

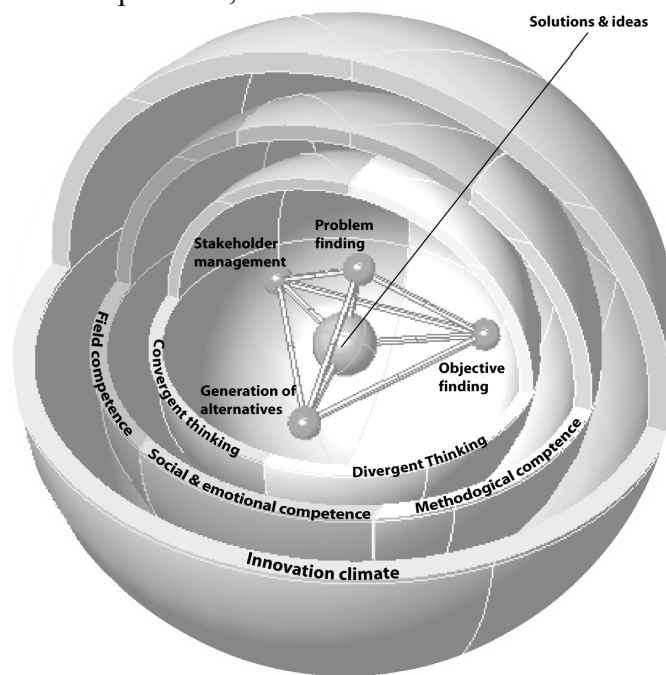


Figure 1: Planetary Model (see also [7][8])

Since the whole system is strongly interconnected, the planets can neither be seen in isolation from each other nor as isolated from the influence of the rest of the cosmos. They are continuously interacting. These interdependences also lead to permanently changing pattern. Circularity instead of linearity becomes the determining element. By focusing on the single planets, it becomes obvious that each planet itself stands for another more detailed micro-cosmos, in which single moons (as subsystems of the single planets) are surrounding the planets in a dynamically interacting way. Moreover, the moons are influenced by the other planets and the cosmic clouds as well (see figure 1). The planet “Problem finding” is surrounded by the moons “Cognition of problems”, “Creation of problems”, “Problem analysis”, and “Problem classification”. The planet “Stakeholder management” is surrounded by the

moons “Stakeholder identification”, “Stakeholder analysis”, “Stakeholder classification”, and “Stakeholder action plan”. The planet “Objective finding” is surrounded by the moons “Cognition of objectives”, “Creation of objectives”, “Adequacy of objectives”, and “Objective classification”. The planet “Generation of alternatives” is surrounded by the moons “Secondary analysis”, “Idea generation”, “Clustering of ideas”, and “Relevance of ideas” (for a detailed explanation see [8]). It is necessary to stress the importance of combining this model with other effective tools. The “Planetary Model” is thought to support the innovators who are working in transdisciplinary teams [9] towards the development of a sustainable innovation.

Nevertheless, the problem-solving agents need further process orientation when working on complex problems. In fact, the Planetary Model could be combined with every other sequential process guide: In order to introduce easily manageable working steps, the underlying working process is roughly divided into four main interconnected phases: System analysis and design, conceptualization, specification, and selection and implementation. Within creative problem-solving I suggest a two-dimensional procedure for the working process: Firstly, these four working steps are the basis of structuring and guiding the working process in the sense of a project management philosophy. Secondly, every stage has always to be seen in the context of its implications for the whole problem-solving process, expressed within the Planetary Model. That means each stage always has to be considered with regard to the problem, the system of objectives, the implications for the various stakeholders, and the influence on the generation of alternatives in interplay with the needed thinking styles and competences, and also in interplay with the innovative climate.

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