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A new Format for new Years / Uno nuovo Format per nuovi Anni (D.P. Errigo)

To be or not to be hyperglobal players? What's the abstraction? (M.R. Astolfi)

The path of complexity science: from theory to managerial practice (G. Dominici)

A Framework for Understanding Social Systems Through Complexity and Self-Organization: Key Steps for Reaching a General Model (J. R. Hernández-Carrión, I. M. de Lejarza y Esparducer)

Abstract

This article aims to provide an illustrative guide and a conceptual framework that incorporates the basic ideas of different approaches originated in Systems Science and Complexity Theory in order to understand the evolution and history of Social Systems. Social and biological organization entail changes involving new types of complex structures, possible only if the system remains far from the equilibrium and there are non-linear mechanisms acting between the different and various elements of the system. In fact, the requirement to provide a simple 'open system' condition is not sufficient to guarantee the appearance of structural changes. Complexity can be measured in terms of evolution or transition from past to future in terms of specific processes that affect the system operation. Alterations and oscillations of the structured system and their relationship to their environment can either come from inside (the system itself, that is, endogenous) or from outside (exogenous events that affect it). Our bifurcation points constitute a map of irreversibility of time, reflecting our elapse following the 'arrow of time'. Every decision made at a bifurcation point involves the amplification of something initially small. The self-consolidation by randomness or chance, gives rise to bifurcations, which is a challenge to which the system must respond. Thus, the history of a system will result always from the amplification of certain fluctuations and self-consolidation for certain processes.

Reframing the Systemic Approach to Complex Organizations as Intangible Portfolios (A. Pitasi, G. Dominici)

Abstract

The aim of this paper is to pave the way towards the inclusion of mainstream sociological approaches (based on Luhmann's approach) for the studies of firms-organizations. In social sciences we can observe that the theoretic consequences of a paradigm shift is significantly represented by the evolution of systemic thinking from Parsons to Luhmann. This shift implies the change from the vision of systemic organizations as "structures" to that of systemic organizations as "communication flows". The milestone of systemic approach in management maybe found in the research and applied works of Anthony Stafford Beer with his Viable System Model (VSM) that today faced a relevant reconfiguration by Golinelli and the Italian school on Viable Systemic Approach (VSA). The paradigm shift in this field has been smoother than in sociology, and didn't imply the discard of the concept of organization as a structure. This because, in management sciences, the perspective and, consequently, the subject of study is the organization and its structure. We think this paradigm shift is possible also in management sciences, if we consider the whole organization as a structured information flow creating a dematerialized structure. Our research question is: "Is it possible to apply in business sciences the fundamental concepts that caused the paradigm shift in sociology?" To answer to this question we discuss about ontology of the firm and of the concept of value in order to understand to what extent intangible communication flows are called upon to be involved in a new definition of structure. Keywords: Systemic approach in Sociology, VSA, value constellation.

Paths for "Stars Manufacturers": Forced to be Systems (complexity) Integrators (M. Paoli)

Abstract

Industrial enterprises cannot be global players without to be systems innovators. They cannot be systems innovators without to be "systems integrators", but does it mean? The aim of this work is to suggest some new theoretical considerations on knowledge and consequently about why and how the control of systems integration can actually be maintained and directed. The basic idea is to support redundancy of knowledge

bases, therefore redundancy of agents (as bearers of such knowledge), but also of organizational contexts, conceived as “containers”, predisposed to allow men and their different knowledge bases to be integrated in order to construct the fundamental axes of systems integration. These visions emerge from⁽¹⁾ the individual capability of each agent-knowledge bearer to imagine complexity, to propose change along with the trajectories of its marching direction (innovations that are used as strategic competitive “weapons”), and from (2) the ability of organization to transform the knowledge of everyone in social visions (firm’s visions). Systems integration is first of all knowledge integration.

The “Systemic” value of Creativity (S. D’Alessandro)

Abstract

Business creative processes are inevitably proceduralized, giving rise to routine innovation management phenomena. When the creative process becomes a procedure it is manifested as a medium. It turns into a “recombination program” of organization system languages. Through a process of “meme”ⁱ recombination, governed by habitual practices, the change that occurs involves a transformation of values, products and services. When innovation is produced, the role of routine is not, as many might think, secondary: habit represents an important moment in the processes of generating competitive advantage and incremental innovation acceleration. This means that creativity contains a “systemic” value generated by its becoming procedure.

On Selection of project team members and complexity (D. N. Antoniadis, F. T. Edum-Fotwe, A. Thorpe)

Abstract

In construction the sub-process of selecting team members, as in individuals not partners, is not implemented. However interconnections and boundaries are formed between both individuals within a team and teams as a whole within the project which cause complexity. Understanding the characteristics of complexity from these interconnections, and how these affect the selection of members into teams will enable the development and implementation of project actions that will support the management of complexity. A two part study was conducted with construction organisations to investigate the level of implementation of team member selection and the level of actions / techniques used to manage the effects of complexity of interconnections. The results indicate that techniques available for selecting project team members are not implemented either as a norm or for managing complexity that arise from individual-team interfaces. The findings call for the implementation of appropriate selection techniques and the development of a framework of actions which will enable the management of the effects of the interconnections complexity using its characteristics

What decision Theory tells us about climate change debate (S. Matera)

Abstract

The complexity of climate system makes climate sciences’ result really uncertain; nevertheless, this matter concerns all of us requiring political as well as individual decisions. For these reason we tried to discover what Decision Theory tells us about climate change debate: do something or not; or better, “mitigate” acting on eventual anthropic causes but risking negative consequences for the general quality of life, or wait for consequences using all resources for “adapt” to new unpredictable conditions? Represented the problem as an intersection between all possible actions to choose from and all possible states of the world in which decision occurs, establishing some (we think) non-controversial preference relation between all possible outcomes we found that mitigation choice is the best one, having highest expected value, if anthropic climate change is (at least) as probable as natural one. Following the most authoritative and recent surveys of scientists and scientific literature, and the last report of the Intergovernmental Panel on Climate Change (IPCC), world leading authority on climate change knowledge, we find that the probability of a human-induced climate change can be much higher than 50%.

ⁱ In the introduction to *The Meme Machine*, by S. Blackmore (OUP, Oxford, 1999), Richard Dawkins includes the OED’s definition of “meme”: “meme (from the Greek *mimema*, ‘that which is imitated’ on the pattern of gene), an element of a culture that may be considered to be passed on by non-genetic means, especially imitation.”