

KNOWLEDGE AND INNOVATION:
JOURNAL OF THE KMCI

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EDITOR'S WELCOME AND INTRODUCTION

Welcome to ***Knowledge and Innovation: Journal of the KMCI***. The Journal publishes original articles relating to any part of the Knowledge Life Cycle (KLC) of organizations or to the Knowledge Management Process and its impact on the Knowledge Life Cycle. Articles can focus on

- Innovation,
- The Knowledge Life Cycle and its subprocesses: Information Acquisition; Individual and Group Learning; Knowledge Claim Formulation; Knowledge Claim Validation, broadcasting, searching/retrieving, teaching, and sharing
- the Natural Knowledge Management System of organizations,
- their Artificial Knowledge Management Systems (IT-related aspects of KM),
- the relationship between the two, or
- the impact of knowledge management processing on the KLC or any of its components, and
- normative or philosophical issues related to the KLC and the Knowledge Management Process.
- critical commentaries on articles appearing in the Journal or in other sources

A particular emphasis of the Journal is on complex adaptive systems (*cas*) approaches to knowledge management issues. Human organizations exhibit *cas* behavior. Knowledge management in such organizations must adapt itself to this behavior, if it is to be successful. Without such adaptation, or alternatively, the complete restructuring of the organization, KM initiatives are bound to fail. It is at the nexus of knowledge management, *cas* and organization theory that the means to success in knowledge management will be found. ***Knowledge and Innovation*** is the only *Knowledge Management* periodical that has this nexus as its focus.

Another way in which ***Knowledge and Innovation*** is very different from other journals devoted to KM is in our emphasis on the whole knowledge life cycle. This journal does not equate sharing tacit knowledge, or electronic search and retrieval, or document management, or other singular activities with KM. For us, KM is about what we do to manage the swirl of problem solving, knowledge production, innovation, and knowledge integration, in our organizations. Knowledge sharing is part of that process, electronic search and retrieval, document management, and a hundred other activities are also part of it. The trick is not to look at activities in isolation but to analyze them in their broader *cas* organizational context. We see ***Knowledge and Innovation*** as a forum for doing that sort of systems analysis.

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The Journal is published quarterly by the KMCI and will be distributed to corporate and organizational sponsors, to subscribing individuals, and to KMCI members. It is a refereed Journal with articles reviewed by members of the Editorial Board. Its readers will include professors and students, government professionals, private sector knowledge workers and practitioners, and knowledge managers in all areas. Welcome again to our new community. We hope you'll join the party by submitting articles for our consideration and by reading us faithfully every quarter. For our part, we will supply you with the authoritative source of articles on Knowledge Management.

The inaugural issue of "Knowledge and Innovation" appropriately emphasizes issues of theory and scope rather than practice or IT applications. These aspects of KM will be amply represented in future issues." But in this issue our goal is to begin to discuss the "big questions" in KM in a rigorous way, and to sketch the parameters of "second generation KM."

Major themes in the issue include knowledge production, innovation, and creation, as well as the design of organizations and artificial systems that will support these activities. Complex Adaptive Systems Theory, General Systems Theory, Organizational Learning, Epistemology, Object Technology, Artificial Systems architecture, and Artificial Intelligence inform many of the articles.

Three articles consider the KMCI's Knowledge Life Cycle (KLC) model in some detail. While the KLC was initially developed as a group product, each of the authors using it in this issue have developed their own slightly differing versions of the KLC as their ideas developed over time. Also, their detailed developments of the KLC model differ. For example, Cavaleri and Reed develop the KLC model in the context of Pragmatist (in particular Peircian) epistemology, while the epistemology underlying my interpretation of the KLC is Popperian in origin. In any event, even though the KLC model is used in three of our articles, the reader should recognize that she is dealing with three different KLC models, not one.

Our *inaugural issue* begins with an analysis by Alex and David Bennet of the characteristics of the next generation knowledge organization. The analysis uses complex adaptive systems theory, organizational learning, and organization theory to develop a detailed conceptual framework for viewing the next generation organization as an Intelligent Complex Adaptive System (ICAS) -- a true learning organization.

Next, Mark McElroy explores the nature of "second generation knowledge management," a discipline based on the KMCI's Knowledge Life Cycle (KLC) conceptual framework, and on Mark's imaginative integration of complexity theory, organizational learning, general systems theory, and intrinsic learning/motivation theory with the KLC. Mark also presents an outline of a

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"seven-day" second generation process based on the Policy Synchronization Method (PSM) suggested by his theoretical development.

In "Taking Knowledge Management to the Next Level: Directions for Future Knowledge Systems Research," Arthur J. Murray contrasts computational and non-computational approaches to knowledge management. Art describes the existence of epistemic gaps between non-computational and artificial systems and associates mental models and individual level phenomena with natural systems and collective, explicit knowledge with artificial systems. He argues that most commercial KM efforts focus on the artificial and that the next level of KM Research must "move from purely computational methods to approaches that integrate computation, perception and cognition." He then reviews recent developments in the fields of Applied Semiotics and Cognitive Computer Graphics, in order to illustrate future research directions in KM.

My own article on Enterprise Knowledge Portals (EKPs) takes the EKP concept "from the top," and views it as a comprehensive application supporting knowledge processing and knowledge management. That is, it begins with a business process framework, continues with development of the KLC model, both defines and specifies KM relative to the KLC, defines the EKP in terms of the knowledge processing and KM frameworks, and then moves on to specify the architecture of the Enterprise Knowledge Portal.

Our fifth article, by Steven Cavaleri and Fred Reed, on "Designing Knowledge Creating Processes" focuses on what knowledge creation is and how to improve it. A provocative and imaginative synthesis of the KLC model, organizational learning, general systems theory, and pragmatic epistemology, this article also contains a useful review of a number of competing models of knowledge production.

James Courtney, Bonsug Chae, and Dianne Hall contributed the final article in this issue. "Developing Inquiring Organizations," takes C. West Churchman's classification of inquiring systems as a starting point for addressing the problem of rapid and effective organizational adaptation in the highly competitive business environment the early 21st century. The article presents a careful analysis of Churchman's types and then applies the Singerian Inquirer in an effort to present a solution to the problem in the form of specific advice to those seeking to implement a Singerian Inquirer. Included in the advice is a new architecture for a partially-automated knowledge management system supporting the Singerian Inquirer and continuing to incorporate human knowledge and creativity.

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