Chapter III
A Theory of Organizational Cognition

INTRODUCTION

Chapter III introduces definitions, premises, and propositions towards a theory of organizational cognition. It proposes principles about organizational cognition and thus it clearly distinguishes organizational cognition from the concept of organizational learning. It outlines the concept of hierarchic levels of cognition in organizational systems and thus it proposes cognition as an important element of the organization. It presents new definitions on organizations, environment along with the relations between them through cognitive perspectives. Such definitions include concepts of intelligence, cognition, autonomy, and complexity for organizations. It derives a definition of environmental complexity and it proceeds by introducing propositions about the relations between organizational complexity and environmental complexity. While the former is synonymous with organizational cognition, the latter is synonymous with environmental uncertainty.

BACKGROUND, CRITICAL VIEW AND ADVANCEMENTS

Organizational cognition is a discipline which has its foundations based on multidisciplinary research areas that span from social sciences, economics, business administration, management, sociology, political science, anthropology, philosophy, psychology, information systems, cognitive sciences and computer sciences.
to some other areas that play an important part in organizational studies such as organizational behaviour and organizational theory (Nobre, 2005).

The subject of organizational cognition has been touched in the literature after advancements in the discipline of organizational learning which has received important and diverse contributions from distinct researchers (Argyris & Schon, 1978; March & Olsen, 1975; and Senge, 1990).

Multidisciplinary studies on organizational learning and knowledge management are presented in (Dierkes et al., 2003); and on organizational intelligence, and organizations resembling information processing systems and distributed computational agents are presented in (Blanning & King, 1996; Carley & Gasser, 1999; and Prietula et al., 1998). However, a formal study which relates organizations with concepts of cognition and learning (innovation) was previously and firstly proposed in (Simon, 1947; March & Simon, 1958; and Simon, 1997b).

Nevertheless, despite some connections in between organizational learning, knowledge management, organizational intelligence and organizational cognition, this latter subject has began to receive more attention only from the beginning of the 21st Century, with some book publications. The Lant and Shapira’s book for example (Lant & Shapira, 2001) presents a collection of chapters on the subject of cognition and its impact on organizational studies. Contributors to their book chapters include famous researchers such as James March and William Starbuck. However, despite providing the literature with a set of chapters that introduce many perspectives on the general subject of organizational cognition, Lant and Shapira’s book does not give a concise definition of organizational cognition. Moreover, and most important, it does not make a clear distinction of the concept of organizational cognition from those of organizational learning, knowledge management, among other related terminologies which have been used through an interchangeable way in most of the literature on these subjects. Another publication which does not clearly distinguish these terms is the book of Iandoli and Zollo (2007). Additionally, while most of the books available in the literature have focused more on cognitive processes of management, in this book we are more concerned with the cognitive processes of the organizational structure which is composed by the goals, technology, social structure and participants of the organization.

Proceeding further, what makes our book distinct is that we provide a set of principles, definitions, premises and propositions towards a theory of organizational cognition. We clearly derive definitions on organizational cognition and we also distinguish it from organizational intelligence, organizational complexity, organizational autonomy and organizational learning. This new background on organizational cognition plays an important part in the study of organization design, in the relations between the organization and the environment, and in the analysis of the implications of cognitive machines for organizations. Moreover, in Part V, on
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