

[DOI: 10.20472/IAC.2020.056.004](https://doi.org/10.20472/IAC.2020.056.004)

**DOMAGOJ HRUSKA**

Faculty of Economics and Business, University of Zagreb, Croatia

**ORGANIZATIONAL ACTION BETWEEN INDIVIDUAL AND  
COLLECTIVE KNOWLEDGE: CASE FOR APPLICATION OF  
COGNITIVE PARADIGM IN DEALING WITH ORGANIZATIONAL  
COMPLEXITY**

**Abstract:**

This theoretical paper argues that a proper way to deal with the problem of organizational complexity is through the paradigm of managerial and organizational cognition and proposes a three part framework for analysis of organizational dynamics. The perspective of organizational complexity arises from the notion that a number of different kinds of activities are being carried out simultaneously by different people or groups of people. Therefore, there is no single authoritative locus of control that sets tasks and controls results for everybody. The paper proposes that in order to generate helpful theories of organizational action in such context we should be adapting a cognitive paradigm which define ways in which people in organizations define the situation, become aware of alternative courses of action, evaluate the consequences of these actions, and consider the significance of the action in a socially constructed world. The paper argues that there are three crucial tension that would benefit from the application of complexity theory in organizational studies: the tension between subjects and their surroundings which give rise to its unpredictability, the tension from discrepancy and ambiguity of interpretations of organizational members and the tension between individual interpretations and coherent and meaningful modus operandi set by the management.

**Keywords:**

Organizational complexity, managerial and organizational cognition, interpretations, organizational mind

**JEL Classification:** D23, M10, M14

## **1. Introduction**

Organizational theorists usually hold the notion how the environment is located in the minds of organization's agents and that it is imposed on the experience of each of them through their activity. This kind of view of the environment ignores the fact that the object and the subject often have a significant impact on each other, and that the leader process constructs, extracts or destroys many of the features of the environment. This paper argues that the complexity of organizations stems primarily from the fact that it is partly formed by the minds of the people who constitute them. In that respect, even the smallest organizations can be complicated if they are made up out of people who construct confronting interpretations of reality. Application of this approach to organizational dynamics calls for the research paradigm of managerial and organizational cognition, focused on the development of models and knowledge structures as well as on their implications for the organizational context.

Hodgkinson and Sparrow (2002) have set the four basic principles of organizational research from the perspective of managerial and organizational cognition. First principle is that individuals are limited in processing large number of different and complex stimuli from the environment. Secondly, they use a variety of strategies aimed at relieving the burdens of information processing. Thirdly, the individuals develop a simplified understanding of reality that is stored in their minds. Finally, mental representations serve as filters through which the upcoming information is progressively processed. Coming from that perspective, the paper proposes three crucial tension that would benefit from the application of cognitive paradigm in organizational studies: the unpredictability of the surroundings, the correlation of interpretations within the organizational system, and tensions between organizational and individual mind.

Firstly, we argue that the notion of unpredictability comes from the inability to control the events in the organization surroundings. Treatment of the organizational environment by the sequential information processing paradigm emphasizes the idea that the environment is an objective entity. Second tension that the paper analyses is the problem of differences of interpretations of organizational members. In the context of organizational research, interpretations are used in explaining the discrepancy and ambiguity of activities of the members of the organization. Finally, besides the potential conflict of interpretations between organizational agents, the complexity of organizational dynamics is also influenced by the tensions between individual interpretations and something we can call an "organizational mind" - a kind of amalgam of mechanistic and rational interest of entities that hold position of power.

## **2. Tackling organizational complexity through paradigm of organizational and managerial cognition**

Although the application of cognitive theory to the study of organizations is a relatively new phenomenon, the need for cognitive approach to managerial and organizational analysis can be found in many "classics" of organizational theory and the theory of strategy. Thus, Weick (1995) notes that Barnard's text on the functions of the executive (Barnard, 1938) introduced the idea of the organizations as systems of action, consciously coordinated through the controlled information processing and communication. Simon (1997), on the other hand, lays the foundations of modern cognitive theories in organizational studies by introducing the idea

that decisions are never entirely rational due to limitations in the capabilities of information processing. Furthermore, March and Simon (1993) emphasize the cognitive dimension of managerial work through the elaboration of the ways in which organizational routines release the attention that can be put in use for the non-routine decision making. Although the foundations of application of the cognitive perspective in management can be found in these and other classic works, it is only in the last fifteen to twenty years that the discipline of organizational and managerial cognition has grown into a separate research area.

The need to focus on the cognitive paradigm of organizational behavior has led to the development of the set of theories within the area of naturalistic decision making. Naturalistic models emphasize cognitive processes associated with creating images on the situation, mainly through categorization (Mervis and Rosch 1981, Klein 2008), the use of knowledge structures (cognitive schemas) (Ackermann and Eden 2011) and the construction of mental models (scenarios) (Lipshitz 1989, van der Heijden 2005). Approach to decision making from the perspective of managerial and organizational cognition differs from the previous approaches precisely in the fact that it focuses on real managerial action, not the abstract rational models. For instance, the concept that has played a major role in research of individual and organizational decision making is the concept of bounded rationality (Simon, 1997). Namely, the idea that managers make decisions in a situation of complete information, well-defined and logical information process is not consistent with the reality of organizational life. Managers do not have complete information, knowledge or the competence to process a large amount of available information (March and Simon 1993).

Proponents of managerial and organizational cognition hold that managers form personal models of organizational situations and that these models significantly differ from the abstract models that are presumed by the formal theory of choice. Thus, one of the ways that we can define the area of managerial and organizational cognition is the nature and the origin of the difference between the models of the “real manager” and abstract, rational models of utility theory. According to Spender and Eden (1998), instead of looking at the manager from the perspective of the computer processor, the cognition view takes him as a key subject in the creation of limited strategic space that forms the basis for the selection process. According to this view, we are unable to predict the nature of managerial response a priori. On the other hand, we assume that we can gain insight into personal models that managers make and use in the decision making. Major areas of interest are the limits and structures these constructed models as well as methods of their use. These questions are focusing the research areas of managerial and organizational cognition towards the area of cognitive, not behavioral sciences (for example as the field of behavioral economics).

### **3. Three Essential Tensions in Organizational Dynamics**

#### **3.1. Tension Between Individuals and the Unpredictable Surroundings They Create**

The notion of unpredictability comes from the inability to control the events in the organization surroundings. Treatment of the organizational environment by the sequential information processing paradigm emphasizes the idea that the environment is an objective entity. The stance has been emphasized by the reductionist mindset so that the alternative is, usually, overlooked. And the alternative is that, as Weick (1995, 34) argues: “People create their environments as those environments create them.”

Weick (1979) argues how the organizational reality described by these terms is relative because the correctness of the decision is dependent on the observation used for its evaluation. Follett (1924) alerts about the issue of circularity of decision making context and actions of the organizational agents when she says that the activity of the individuals are only in a limited sense defined by the stimulus of the situation, since the activity itself helps to define the situation that causes the activity. In other words, as Simon (1997) points out, the decision of an individual is not only the product of his mental processes but is also under the influence of organizational dynamics. An extremely important effect of such a process for leadership is exactly that there is no singular, monolithic, fixed environment that is separated from the organizational members. Members of the organization define the environment, and the environment defines them. There is no "they", as Weick (1995, 31) argues, which set the environment before us. The word "they" refers to active individuals within the organization whose actions significantly affects the way it which rest of the people in the organization think and act.

### **3.2. Tension Between Interpretations as a Reasons for Discrepancy and Ambiguity of Organizational Action**

Interpretation is the key element that distinguishes social organizations from the system of lower complexity. Interpretation is an explanation of meaning of the object of attention. To interpret means to decode events from the environment into categories that form part of a group's culture or language system (Weick 2001). The act of interpretation involves creation of mental maps and representations that simplify decision making situation in order to enable action.

In the context of organizational research, interpretations are used in explaining the discrepancy and ambiguity of activities of the members of the organization. As March and Olsen (1976) point out organizations are often incomprehensible precisely because they are woven of many conflicting interpretations of which all are acceptable.

Comprehensive ambiguity that is an essential feature of the organization means that most of what we know comes from the process of interpretation. Interpretations are built through interaction. Smircich and Stubbardt (1985) describe the organization through the quality of interaction as a collection of people who share beliefs, values, and assumptions that encourage organizational agents to build mutually reinforcing interpretation of their own activities and the activities of others. We cannot manage the organization unless we accept the possible differences in interpretations.

From interpretation point of view, the organizational dynamics can be presented as the flow of experience. Weick (1995) notices how members of the organization develop conclusions by intersection of the flow of experience. These conclusions are cognitively arranged in causal maps that predetermine future behavior. Predestination of a certain type of behavior defines the patterns of expectations about the future course of events. So created "rationalities" are included in broader belief systems out of which some are individual, and some shared by the group.

The process of interpretation arises from the need of individuals to recognize that there is an external reality in their relationships. Interpretation building is indispensable organizational activity or otherwise people would be overwhelmed by the vast number of events that surrounds them. Daft and Weick (2001) assert how the interpretation in the

organizations is the process of translating events, developing sense making models and connecting the conceptual schemas. This perspective means that people act in the ways that confirm their propositions about the external world. That way socially constructed world imposes limits to orientation and action. Related routines and usual patterns of activity are such socially constructed way of adjustment of interpretations.

### **3.3. Tensions between individual and organizational mind**

Besides the potential conflict of interpretations between organizational agents, the complexity of organizational dynamics is also influenced by the tensions between individual interpretations and something we can call an “organizational mind” - a kind of amalgam of mechanistic and rational interest of entities that hold position of power. Organizational mind is evident in a coherent and meaningful set of rules set by the management. Thinking patterns of organization members are influenced by these rules, but not entirely. Simon (1997) asserts that the cross-section of the two concepts creates an area in which the behavior of the members of the organization is expected and approved. According to Spender (1998), the existence of these tensions is the very reason management research is required.

The existence of an organizational mind suggests that the idea of cognition can be applied in organizations in a similar manner as applies to individuals. By adopting this assumption we rise above the limited scope of mechanistic or “objective” principles of classical management theory. The difference between individual and organizational cognition can be found in the fact that in the case of individual cognition there is a certain level of awareness that is innate to human beings. Spender (1998) however, warns that the problem of organizational cognition is not exhausted by the development of a set of organizational roles and rules. It can be done with ease. The problem is to explain the development of a higher level of collective consciousness that is the foundation of autonomous organizational cognition and behavior.

Collective or group "mind" is possible at the level in which the group members share purpose and values. Organizational system of shared values, beliefs and norms are often referred to as the concept of organizational culture. Spender (1998) noticed that the terms organizational culture and the collective mind are difficult to separate, although sometimes used interchangeably.

## **4. Conclusion**

Paradigm of managerial and organizational cognition in principle rejects the assumption that managerial decision-making can be adequately analyzed through rational assumption of complete data, well-defined objective function and the rigorous logic of the selection process. Modern cognitive science can be traced back to the Descartes analysis of our “impression” of reality. Descartes draws attention to the ways in which wax makes an impression on a seal and claims that this is similar to the imprinting of sensory impressions on the surface of our minds (Descartes 1984). Today, however, we know that mental models are not direct impressions of the reality on the clean surface of our consciousness. They are the result of the complex process of sorting, manipulation and conversion that are shaped by our present knowledge, intentions and interests.

Application of the theoretical frameworks from the area of cognition in the study of organizations is a propulsive research field. The model of implementing radical change is

embedded in the research paradigm of managerial and organizational cognition. Research framework of managerial and organizational cognition analyzes subsystems of higher mental processes and their role in decision-making (Eden, Jones, and Sims 1979, Eden and Spender 1998, Lachman, Lachman and Butterfield 1979). The area of study fully formed in the last twenty years, but its beginnings can be set in the time of development of information processing paradigm in psychology research. In the late fifties of the last century occurred a change of paradigm in a number of scientific fields now known as a "cognitive revolution". Herbert Simon, George Miller and Noam Chomsky are the forerunners of a new research paradigm of human nature. Their interest was not in analyzing the objective reactions of respondents to the stimulus as it was in the dominant psychology paradigm before them. They wanted to discover what the respondents know, how they learn and how the knowledge is used. The research emphasis has, therefore, shifted from what people are doing to what people know.

In this paper we argue that the three issues that would benefit from the application of complexity theory in organizational studies are the unpredictability of the surroundings, the problem of interaction that arises due to the differences of interpretations of the organizational agents and the problem of tension between individual and organizational view on the organization. By analyzing appropriate approaches in which cognitive paradigm can be used for addressing these tensions within which all organizational activity takes place the paper offers

## References

- Ackermann, Fran, and Colin Eden. 2011. *Making Strategy: Mapping Out Strategic Success*. Thousand Oaks: Sage Publications.
- Barnard, Chester I. 1938. *The Functions of the Executive*. Cambridge: MA: Harvard University Press.
- Daft, Richard L., and Karl E. Weick. 2001. "Toward a Model of Organizations as Interpretation Systems." In *Making Sense of the Organization*, edited by E. Weick, Karl, 241-259. Malden: Blackwell Publishing.
- Descartes, Rene. 1984. *Principles of Philosophy*. Translated by V. R. Miller and R. P. Miller. New York: Springer Netherlands.
- Eden, Colin, Sue Jones, and David Sims. 1979. *Thinking in Organizations*. London: The MacMillan Press.
- Follett, Mary Parker 1924. *Creative Experience*. New York: Longmans Green.
- Hodgkinson, Gerard, and Paul R. Sparrow. 2002. *The Competent Organization*. Buckingham: Open University Press.
- Klein, Gary. 2008. "Naturalistic Decision Making." *Human Factors: The Journal of the Human Factors and Ergonomics Society* 50:456-460.

- Lachman, Roy, Janet Lachman, L., and Earl Butterfield, C. 1979. *Cognitive Psychology and Information Processing: An Introduction*. Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Lipshitz, Raanan. 1989. "'Either a medal or a corporal': The effects of success and failure on the evaluation of decision making and decision makers." *Organizational Behavior and Human Decision Processes* 44 (3):380-395.
- March, James G., and Herbert Alexander Simon. 1993. *Organizations*. 2<sup>nd</sup> ed. Oxford: Blackwell.
- March, James G., Olsen, Johan P. 1976. *Ambiguity and Choice in Organizations*. Bergen, Norway: Universitetsforlaget
- Mervis, Carolyn, and Eleanor Rosch. 1981. "Categorization of Natural Objects." *Annual Review of Psychology* 32:89-115.
- Simon, Herbert Alexander. 1997. *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization*. 4<sup>th</sup> ed. New York, NY: The Free Press.
- Smircich, Linda, and Charles Stubbard. 1985. "Strategic Management in an Enacted World." *Academy of Management Review* 10:724-736.
- Spender, J. C. 1998. "The Dynamics of Individual and Organizational Knowledge." In *Managerial and Organizational Cognition: Theory, Methods and Research*, edited by Colin Eden and J. C. Spender. Thousand Oaks: Sage Publications.
- Spender, J. C., and Colin Eden. 1998. "Introduction." In *Managerial and Organizational Cognition: Theory, Methods and Research*, edited by Colin Eden and J. C. Spender, 1-13. Thousand Oaks: Sage Publications.
- van der Heijden, Kees. 2005. *Scenarios: The Art of Strategic Conversations*. 2<sup>nd</sup> ed. Hoboken, NJ: John Wiley & Sons.
- Weick, E., Karl. 1979. *The Social Psychology of Organizing*. Reading MA: Addison-Wesley.
- Weick, E., Karl. 1995. *Sensemaking in Organizations*. Thousand Oaks: Sage Publications.
- Weick, Karl E. 2001. "Organizational Redesign and Improvisation." In *Making Sense of the Organization*, edited by Karl E. Weick. Malden, MA: Blackwell Publishing.