Information and Its Conceptual Perspectives

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INTRODUCTION

Information has attributes/positivist concepts that some authors use to better understand it. Others are critical about information subjectivism. This chapter discusses conceptual perspectives of information. The aim is to study the concepts of information from some areas of knowledge of the social sciences, cognitive and business looking to propose a concept of information in the field of information science. The methodology of the study is formed by bibliographical research. It is concluded that the concept of information is still in full development.

The concept of information depends on the perception of information (Kirk, 1999). Although this is not something that shocks, raises some interesting questions and research opportunities. For example, as we get the information? What are the claims, limits and consequences of these perceptions? Can these perceptions be described and why?

Fundamental Concepts

The perception of information[1] not only influences our view of information, but also our perception of information system (Klein & Hirschleim, 1987), our perception of communication (Mokros, 1993, Schement, 1993) and the conduct of research (Newman, 2001, Schement 1993). This means that the perception of information, which we prefer to call information concepts, have a profound influence in the field of information science.

The information concept fascinates many scientists from different fields such as biology, psychology, computer science, sociology, economics, management, political science, statistics, philosophy, communication and information studies (Mokros, 1993, Newman, 2001, Ruben 1993, Schement, 1993). In all these fields the information is an important concept, but at the same time none of them can claim the information as being relevant only for them.

The information should be viewed as an interdisciplinary concept. This means that the concepts of information must be studied in different disciplines. It also means that the concepts of information are not only relevant in the field of information science.

On the concept of inter-disciplinarity of information no deal has emerged and no unifying theory is presented as imminent (Schement, 1993). When information is defined "the abundance and diversity confuse us" (Braman, 1989, p. 233). A tempting conclusion that we reached is that the meaning of information depends on the context. While many argue that we need a theoretical perspective of information (Devlin, 1999, Aefiner, 1999, Newman, 2001). We do not intend to define a theoretical perspective, but only present the different concepts in different disciplines, as well as a critical analysis of the different concepts.

Newman (2001) describes a variety of concepts in different sciences that can be grouped as follows:

- Probabilistic concept;
- Concept of information processing;
- Ecological concept of info;
- Social and organizational concept of information.

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The probabilistic concept of information is that low-probability events represent high information content. An important application of this concept is the information theory Shannon and Weaver (1949, in: Newman, 2001). In this theory the mathematical representation of the transmission of a message is presented as if the information was a measure of predictability.

Logic, cybernetics and philosophy also correlate the information with the probability (Fisher, 1934, Carnap & Bar-Hillel, 1952, Popper, 1965, Mackay, 1969 in: Newman, 2001). But these concepts differ in important ways, as for example, in the interpretation of probability and on the semantics of the information. With respect to the semantics of the information, many concepts see the information as reduction of uncertainty.

The concept of information processing (or cognitive concept) focuses on the thought of cognitive psychology. However this concept, thinking and information processing are seen as analogous. It is clear that the information is the product of thought and that increases knowledge about anything. The model of the cognitive process and the internal representation are the first concern of this approach.

The concept of ecological information is not created, but is present in the world, from the environment, in a given situation. Organizations collect this information actively from the outside world. An important extension of the ecological approach is the situation theory. This reconstructs itself in a mathematical basis, and makes a clear distinction between information (content or information) and its representation.

The social and organizational concept of information falls within the sphere of labour: work associated with the concept of information economy. In this category, the information relates to the processing of the same and the information pyramid model is often used. In this model a data must be processed to produce information and the information should be processed to produce knowledge.

An important ingredient of the information economy is the quantification of "work information" and "information product", used among other things to show the importance of knowledge in the modern economies (Wallerstein 2000, Murteira, 2001, Brandt, 1995, Nicholas, 2000, Handy, 1990, Hauknes, 1999). In the well-known effort of Porat (1997, in: Newman, 2001) it is clear that the information is associated with the reduction of uncertainty.

The research of information science focuses on the process of information in the Organization and the need for information of managers in support of decision-making. The satisfaction of this requirement can result in a reduction of uncertainty, which contributes to a better decision-making (Schement, 1993).

Philosophical Concept of Information

Belkin (1978) contributed with many studies for an important problem of information science: the question of the definition of an appropriate concept of information for information science. Although Belkin discusses the concepts of information used only in information science, many of these concepts were originated from other fields and/or are used in a wide variety of these (Belkin, 1978, p. 82):

- **Information as Fundamental Category:** The information is seen as something that is essential to the existence of the universe, as the base, but a different category of matter;
- **Information as Property of Matter and Consciousness:** The information is not regarded as a special category, but as property of matter (i.e., objective information) and or property of conscience or reflection of an individual (that is, subjective information);
- The information as a social-scientific information is based on the classification