Chapter 10
Information Science and Its Relation to Other Areas of Knowledge

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ABSTRACT

The purpose of this chapter is to contribute to a better understanding of the relationship between information science and other areas of knowledge based on the aggregation of existing literature. It is a descriptive study, with the goal of identifying and characterizing the relationship among different areas of expertise. The structure of the chapter summarizes the existing academic work, seeking to generate new knowledge. The results can be used to integrate the relationship of the different areas of knowledge. The chapter seeks to first identify apparent relationships and then focuses in more detail on some of them. It concludes with the implications for future research.

INTRODUCTION

The proposed work intents to provide a reflection on the emergence and evolution of information science, taking into account the context in which it operates. To understand an area or topic is necessary at first, the knowledge of its origins and its history. Thus, we present firstly a short history of the evolution of information science and its development over the past decades.

The consolidation of a particular field of knowledge gives, among other things, the existence of a scientific community. This in turn consists of a number of researchers and scientists concerned to discuss and solve problems that arise in the area. A shared by members of a community paradigm results in the consolidation of the scientific community.

Origin of Information Science

It is difficult to determine when a new science emerges even in the case of a recent scientific discipline such as Information Science. However Foskett (l969) and Ingwersen (l992) indicate the date of l958 as

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one of the milestones in the formalization of the new discipline when was founded in the UK the Institute of Information Scientists (IIS). Meadows (l990) describe the origin 78 of the new discipline from specialized libraries (in industries and other organizations).

According to the same author the discipline has undergone a marked development after World War II due to the emergence of the Mathematical Theory of Information described by Shannon and Weaver in the late 40s. This theory was adopted by many other areas of knowledge, because it explains the problems of transmitting messages through mechanical communication channels. The industrialization of the trade press promoted the literature explosion, no less important than the advent of the Gutenberg press occurred around 1450, whose effects were more evident after the 2ed world war phenomenon. Their contribution to the development of information science was small but important to the history of the area, which drew attention to two necessities.

The first theory which defined clearly the nature of the information of which the professionals were concerned and, secondly, to define the conceptual framework to be applied in the organization of that type of information. According to Pinheiro and Loureiro (1995) Norbert Wiener in 1948 in his book Cybernetics or Control and Communication in the Animal and Machine, and Claude Shannon and Warren Weaver in 1949 in the book The Mathematical Theory of Communication, marked the beginning of what would become the information science. Yet according to the authors, is in the 60's are drafted early concepts and definitions and begins the debate about the origins and theoretical foundations of the new field of knowledge (Pine & Loureiro, 1995).

The authors point to several events that occurred in the 60s which meant the true landmarks of the formation of a new field. A conference held at the Georgia Institute of Technology in 1962, The Weinberg Report 1963, Computer Work, Mikhailov, in 1966, the study by Rees and Saracevic in 1967, and the definition of Borko, in Information Science: what is it in 1968? Borko (l968) defined information science as a discipline that investigates the properties and behavior of information, the forces governing the flow and the processing means to optimize its accessibility and use. It relates to the body of knowledge related to the production, collection, organization, storage, retrieval, interpretation, transmission, transformation and utilization of information.

This includes the investigation of the representation of information in natural and artificial systems [...]. Have a component of pure science that investigates the essence of the matter without considering its application and another component of applied science that develops services and products [...]. For Goffman (l970) the purpose of information science is to establish a unified scientific approach to studying the various phenomena involving the notion of information, if such phenomena are found in biological processes in human existence or machines created by humans. Consequently, it must be related to the establishment of a set of fundamental principles that govern the behavior of the entire communication process and its associated information systems.

Griffith (1980) proposed a similar definition that provides information science as a discipline that seeks the creation and structuring of a scientific, technological and systemic corpus related to the transference of information knowledge. Saracevic (l991) studied the evolution of Information Science and defined it as,