INFORMATION SCIENCE: BRIEF REVIEW OF SOME IMPORTANT CONTRIBUTIONS OF THE AUTHOR

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Abstract. *The humankind leadership by means of the information knowledge was known even from the antique times (see e.g. John 1:1). The computers appearance at the middle of the 20th century strengthened even more the dominant role of Information, Not only that this is present in all types of processes (human: cultural, scientific, technical, of trade, etc. and biological, in the field of living beings), but – additionally – the information initiates, sustains and ensure the success (through favorable results) of all these processes. As we have pointed out already, the computers represent only a tool for the information processing and transmission. Given being that usually the studies concerning the history of the Information Science and Technology refer mainly to the techniques intended to the transmission and use of Information, the present work focuses on the: a) detailed description of the basic aspects (statistical, structural-syntactic, semantic, of accuracy remained for the complex systems, pragmatic - of action, teleological-apobetic) of the Information science, b) main contributions from the last 100 years, c) Romanian contributions, of the fellows of the Academy of Romanian Scientists, particularly.*

Keywords: Shannon's Information Theory, Syntax, Semantics, Information Accuracy, Pragmatics, Apobetics

1. Introduction

It is well known that any idea, any device, any installation, and even any living being involve some specific information (see e.g. James Gleick [1a]). Referring to the mass/energy – information relationship, the Princeton's Physics professor John Archibald Wheeler (1911-2008) launched (in 1989) his famous saying "It is bit" [1b]. Taking into account that "It" could be anything, one arises presently the question: Could the information be even more fundamental (basic) for all our activities than the matter itself?[+] Given being the information is an extremely complex concept, involving various types of expression (e.g. by means of the human speaking, nervous activity processes, hereditary features transmission, economical processes, different types of electronic communications, etc.), the general description of Information represents a very difficult task, a true "puzzle". In such conditions, the easiest beginning of the Information description is represented by its quantitative (statistical) evaluations, of the type of Claude Shannon's (1916-2001) [2] achievements.

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[+]*Wheeler has written (1989) even: "It from bit" [1a]!*