The Need for System Thinkers: Steps on Creating Awareness

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Abstract

Development of systems theory have changed the framework for looking at the real world. The entire entities of the observable world, according to this view, are conceptualized as systems, organizations, and wholes with interconnected parts, environment and mechanisms for growth and change. This great development in the way of thinking, understanding and dealing with things has popularized the key concepts of systems thinking, such as open and closed systems, inputs and outputs, feedback, linear and non-linear, causal relationship, etc., which describe the characteristic features of the actual world. Understanding fundamentals of systems theory, therefore, is increasingly becoming necessary for practical purposes. Systems thinking is a holistic view that conceptualizes entities of the real world, concrete or abstract, as 'organized wholes' composed of structure, function, and interconnected parts which work for a common goal of the whole. This holistic view of things is increasingly becoming dominant in various fields of the scientific enterprise. Adaptation to systems thinking can be built gradually upon three basic steps: first, the awareness on importance of systems thinking as an effective approach for learning and management. The second step is to understand the fundamentals and the conceptual framework of systems theory. The third step is to employ systems thinking as a method and framework for analyzing and understanding the characteristic behaviours of the complex phenomenon. This article focusses on the first two stages. It briefly presents fundamentals of the General Systems Theory (GST), its principles and basic assumptions. The article, also, highlights some key concepts of systems theory and explains the different types of systems in a simple manner. An example for successful stories of recent applications of systems theory is indicated in the concluding part. The method adopted for presentation and discussion is theoretical and analytic.

Key words: *systems thinking, organized whole, general systems theory, complexity, analytical thinking, open systems, Bertalanffy*.