Chapter 19
Amplifying the Significance of Systems Theory:
Charting the Course in High Velocity Environments

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ABSTRACT

In system theory organizations are viewed as closed or open systems. An open system interacts with the environment for its sustainability. The closed system does not interact with its setting consequently its behavior depends largely on internal dynamics of its parts. The centricity of an open organizational structure is one created and empowered to learn and change very fast to successfully achieve desired goals. However open systems need to embrace change as follows: transform inputs of energy and information to produce the products demanded by the customers, transact with key stakeholders to access resources, regulate system behavior to achieve stable performance, and adapt to continuously changing high velocity competition to increase productivity.

INTRODUCTION

The discourse progressed in this chapter is about the importance of systems theory and how it is applied to design and implement profound self-awakening change. The technology can be described a broad meta-theory for explaining the structure and behavior of complex wholes called systems. In Davidson (1989), Karl Ludwig von Bertalanffy an Austrian biologist is credited to have invented the general systems theory (GST). This is an interdisciplinary practice that describes systems with interacting components, applicable to biology or organizational studies. In his thesis Bertalanffy (1943) proposed that the classical laws of thermodynamics applied to closed systems, but not necessarily to open systems such as living things. His mathematical model of an organism's growth over time, published in 1934, is still in use today (see Figure 1).

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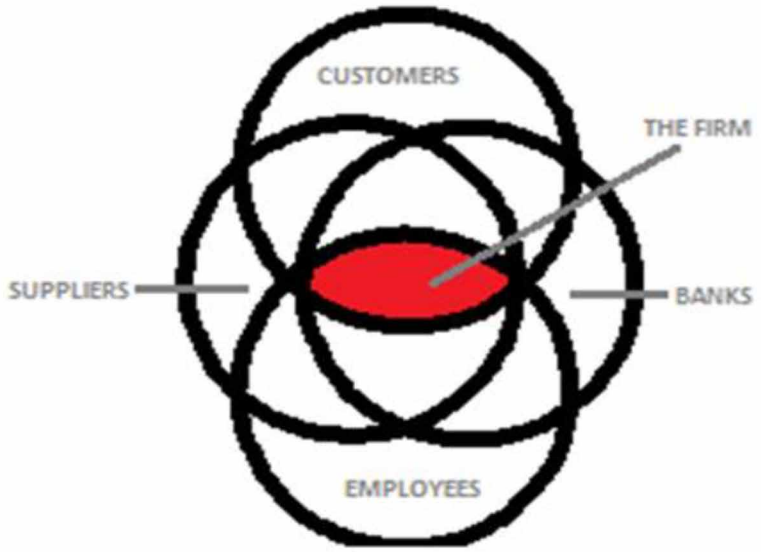
Figure1. The firm cushioned by key stakeholders tends to excel and grow (Mupepi, 2017)



A decade later Kurt Lewin one of the founding fathers of the field of organizational behavior developed the field force analysis to provide a framework for looking at the factors that influence a situation such as increasing productivity. Lewin (1946) examines the forces that are either driving movement toward a goal, helping forces or blocking movement toward a goal i.e. the hindering forces (see Figure 1). The principle is a significant contribution to the field of organizational behavior. French & Bell (1999) have related the field force proposition to organizational and industrial settings. They place emphasis on the ever-changing paradigms in organizational systems and describe some of the important interventions such as the learning organization or quantitative and qualitative research methods. Organization discussions and thinking are critical in the rapidly-evolving contexts of globalization, intensified competition and collaboration.

BACKGROUND

One of the key feature of the systems theory is the notion of the system itself and how it forms an organized whole. Bertalanffy (1943) illustrated the importance of organism adapting to their ecology using the reproduction system of an amoeba. An amoeba is an organism that thrives in marshland or water. An amoeba is often referred to as amoeboid, and is a type of cell or organism which has the ability to alter its shape, primarily by extending and retracting pseudopods (see Figure 2). The amoeba reproduces itself by breaking into two parts one at a time and each part comes complete with identical DNA and continues to replicate itself too until the water is well populated by the organisms. The amoeba adapts to its ecology to thrive.

Bertalanffy argued that human beings were organisms too and for them to succeed they had to adapt to the environment in which they were operating. In organizational systems, this draws attention to identifying the constituent members or subunits of the system and examining relationships among them.