**A Systems Approach** is a **way** of going about taking action in a real world **situation**. The choices that can be made for coping up with complexity are by approaching the world systemically using systems thinking. Everyday ways to describe the world approaches are through the usage of adjectives and some that come to mind are: a scientific **approach**; a reductionist **approach**; an empirical **approach**; a philosophical **approach**; an experimental **approach**; a spiritual **approach**; a practical **approach**; a critical **approach**. Some of these approaches to taking action seem to operate at different levels - both systems and science could be seen as meta-disciplines and different approaches could be taken in both by an aware practitioner. Both systemic and a systematic approach can be encompassed within a system approach, by an aware practitioner.

Simply put, a Systems Approach is based of a system, and simply defined; a **system** is a complex whole the functioning of which depends on its parts and the interactions between those parts. Stated like this, it is clear that we can identify systems of very different types:

- Physical, such as river systems;
- Biological, such as living organisms;
- Designed, such as automobiles;
- Abstract, such as philosophical systems;
- Social, such as families;
- Human activity, such as systems to ensure the quality of products.

The traditional, scientific method for studying such systems is known as reductionism. Reductionism sees the parts as paramount and seeks to identify the parts, understand the parts and work up from an understanding of the parts to an understanding of the whole. The problem with this is that the whole often seems to take on a form that is not recognizable from the parts. The whole emerges from the interactions between the parts, which affect each other through complex networks of relationships. Once it has emerged, it is the whole that seems to give meaning to the parts and their interactions. A living organism gives meaning to the heart, liver and lungs; a family to the roles of husband, wife, son, daughter.

It is not surprising therefore that there exists an alternative to reductionism for studying systems. This alternative is known as Holism. Holism considers systems to be more than the sum of their parts. It is of course interested in the parts and particularly the networks of relationships between the parts, but primarily in terms of how they give rise to and sustain in existence the new entity that is the whole whether it be a river system, an automobile, a philosophical system or a quality system. It is the whole that is seen as important and gives purpose to the study.

Holism gained a foothold in many different academic disciplines, benefiting from the failure of reductionism to cope with problems of complexity, diversity and change in complex systems. In what follows we look at the encounter of holism with philosophy, biology, control engineering, organization and management theory, and the physical sciences. We see how the systems language associated with holism was developed and enriched in each case. Particularly fruitful were the encounters with biology and control engineering, which gave birth to systems thinking as a transdiscipline, studying systems in their own right, in the 1940s and 1950s. This produced a language that describes the characteristics that systems have in common, whether they are mechanical, biological or social.

**Source:** Jackson, M. (2003). Systems Thinking: *Creative Holism for Managers*. University of Hull, UK