General System Theory (glossary)

From SEBoK
general system theory

General system theory (GST), attempts to formulate principles relevant to all open systems. GST is based on the idea that correspondence relationships (homologies) exist between systems from different disciplines. Thus, knowledge about one system should allow us to reason about other systems. (von Bertalanffy 1968)

Sources


Discussion

Ludwig von Bertalanffy developed a research approach based on open system theory (Bertalanffy 1950). He was one of a number of natural scientists who realized that the reductionist, closed system, approach could not be used to explain the behavior of an organism in its environment.

GST also implies a scientific approach, with identify laws and generalized theory to unify all science. Bertalanffy was cofounder, along with Kenneth Boulding (economist), Ralph Gerard (physiologist) and Anatol Rapoport (mathematician), of the Society for General Systems Research in 1957. This group is considered by many to be the founders of System Age Thinking (Flood 1999).

Work Cited


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