



Methods of System Theory

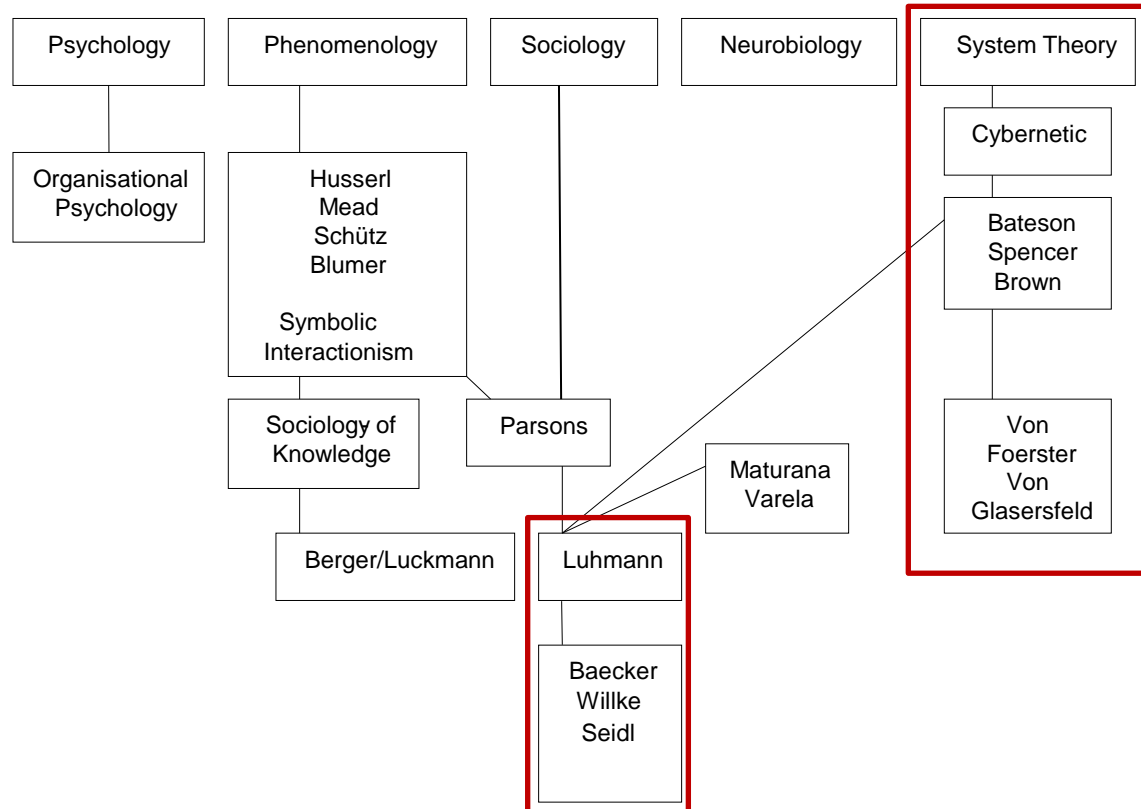
A Generic View

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Overview

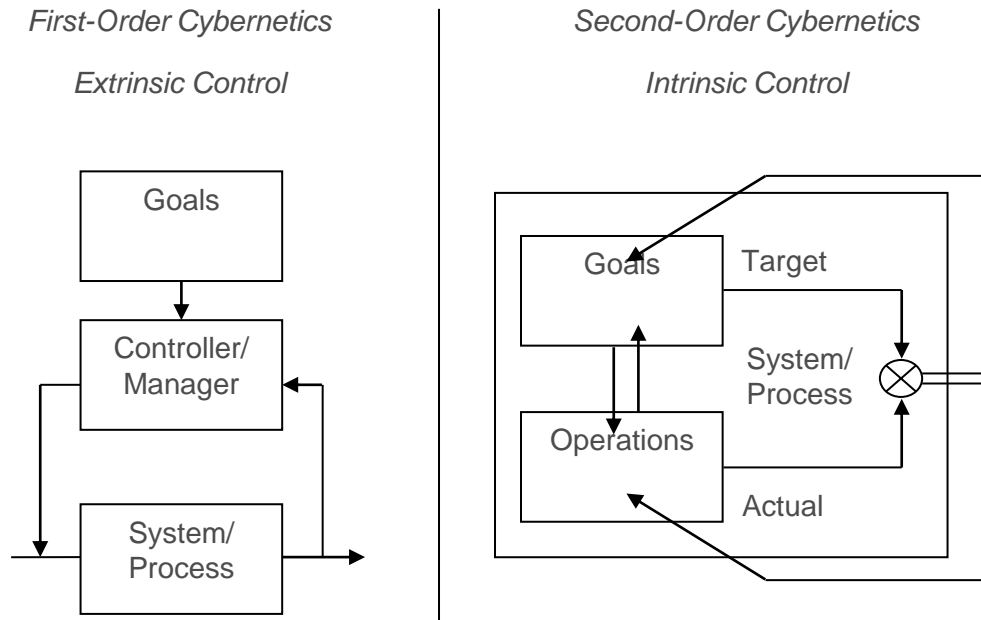
1. Scientific Standpoints
2. Managerial Methods based on Self-Reference
3. How to increase Possibilities of Self-Reference

1. Scientific Standpoint: Disciplinary



(Rüegg-Stürm 2003: 27)

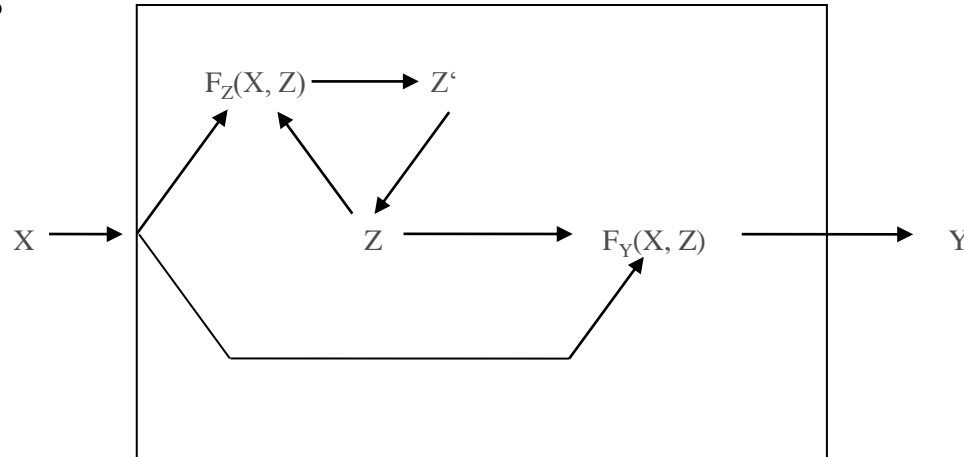
1. Scientific Standpoint: Operational



(Schwaninger 2000: 157)

1. Scientific Standpoint: Observational

a) Non-trivial Machines



(Achterbergh a. Vriens 2009: 78)

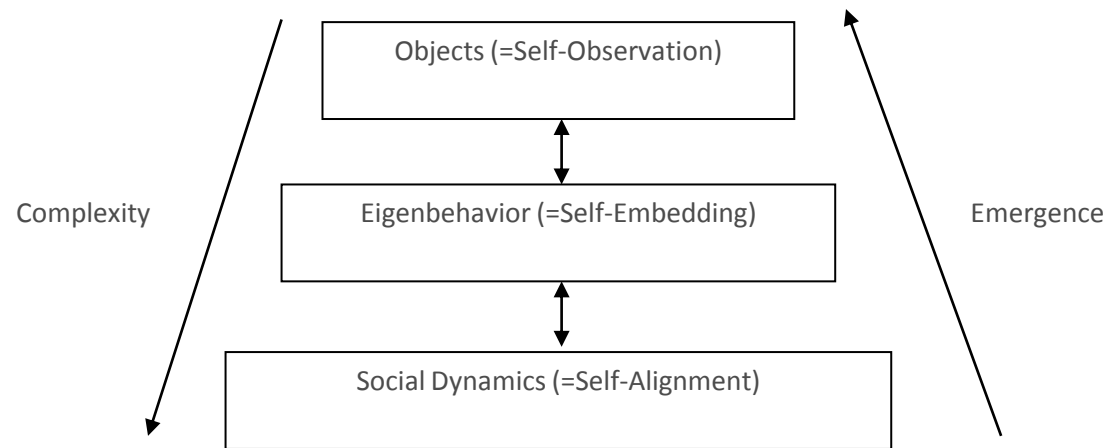
b) Observing Systems

Second-order systems emerge if and only if we assume a self-referential observer.

"[E]verything said is said by an observer to another observer that could be him- or herself [...]." (Maturana 1988: 27)

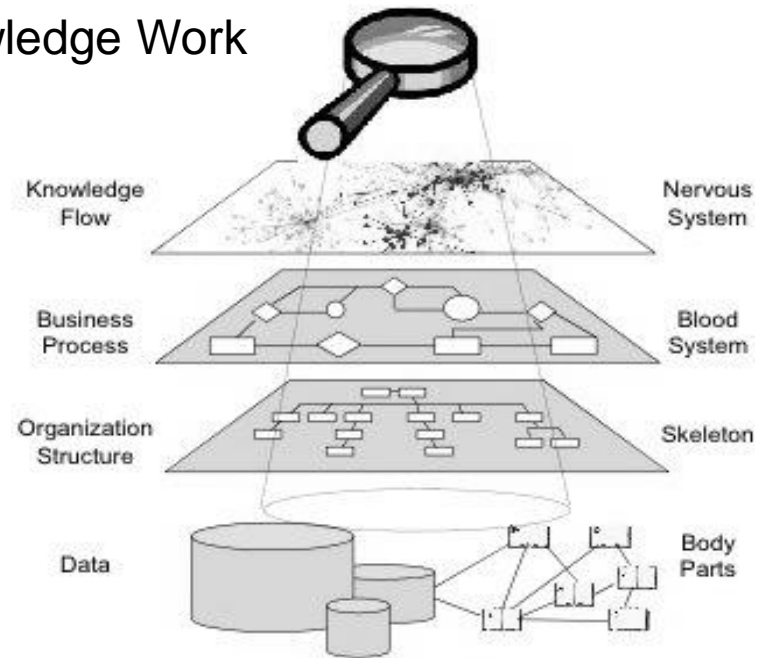
2. Managerial Methods based on Self-Reference

Forms of Self-Reference



3. How to increase Possibilities of Self-Reference

An Example: Knowledge Work

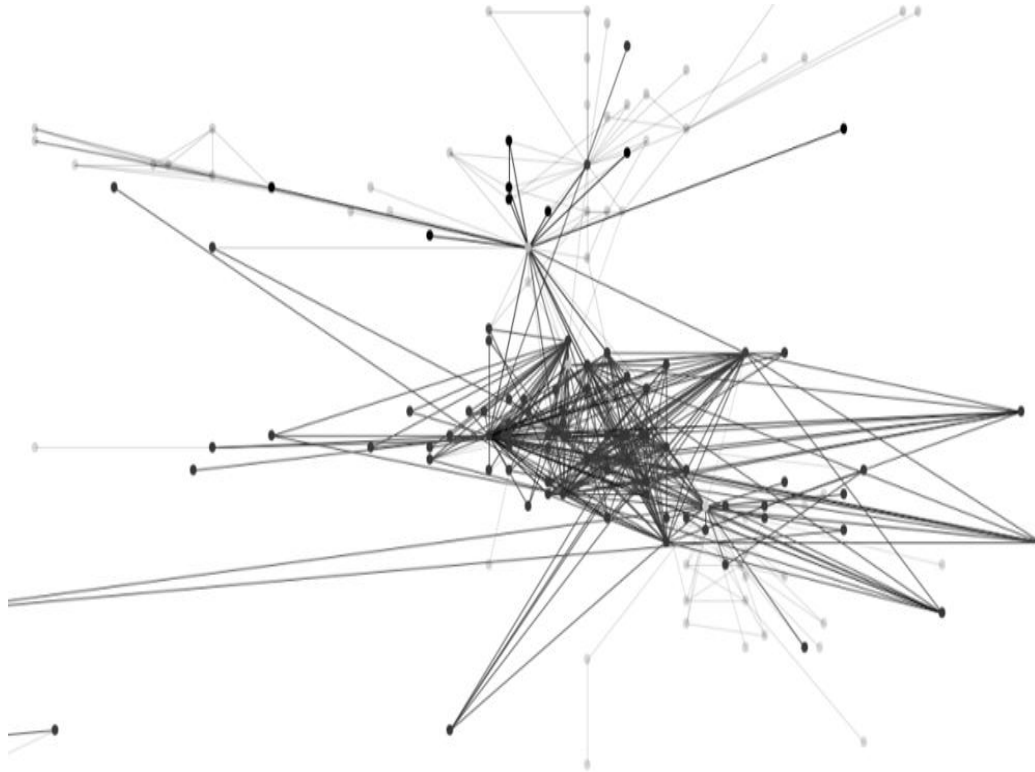


(Galaxy Advisors 2010: n.p.)

The application of eigenbehavior-oriented methods allows

- a) observing the emerging structures of social systems over time.
- b) more precise and quantifiable measurement of social system operations.

3. How to increase Possibilities of Self-Reference



“In general, an attractor network is a network of nodes [...], often recurrently connected, whose time dynamics settle to a stable pattern. The particular pattern a network settles to is called its ‘attractor’.” (Eliasmith 2007: 1380)

Thank you

(Boisot a. McKelvey 2010: 417)