

SYSTEMS SCIENCE and CYBERNETICS: towards an HOLISTIC APPROACH.

La systémique. Appréhender la globalité. Que sais-je ? n° 1795, PUF, Paris, France, 11ème édition (2009), 127 p., Daniel DURAND
<http://afscet.asso.fr>

Systems science and cybernetics abounds in "celebrities"... If you know these authors, you already make some cybersystemics without knowing it.

R. ASHBY (**requisite variety**), Gregory BATESON (**interpersonal communication**), Henri BERGSON (**evolution**), Claude BERNARD (**homeostasis**), Elie BERNARD-WEIL (**ago-antagonism, paradoxical strategies**), BERTIN (diagrams, networks, maps: **graphical semiology**), BOLTZMANN (**behaviour statistical laws**), BOOLE (algebra), BOULDING (**economics systems typology**), BUNGE (**systems general typology**), CANNON, Noam CHOMSKY (**language syntax**), L. COUFFIGNAL, Michel CROZIER (**multiple agents multiple decision systems**), Joël DE ROSNAY (macroscope), DE SAUSSURE (**signs, symbols, linguistic structuralism**), Gérard DONNADIEU & Michel KARSKY (**systemic approach**), J.W. FORRESTER (**systems dynamics**), Michel FOUCAULT (**analogy**), Arthur KOESTLER (**globalism**), LAVOISIER (**isomorphism**), Jean-Louis LE MOIGNE, LEIBNITZ, J. LESOURNE (**fate systems**), Claude LEVY-STRAUSS (**anthropology & structuralism**), Edward LORENZ (**the butterfly effect**), James LOVELOCK (**Gaïa**), MAC CULLOCH (**bionics**), Benoît MANDELBROT (**fractal systems & scale invariance, catastrophes theory**), Edgar MORIN (**method of methods**), Blaise PASCAL (**the Whole & the parts**), Louis PASTEUR, Jean PIAGET (**psychological structuralism**), PRIGOGINE (**autonomy, auto-organisation & dissipative structures**), PYTHAGORE, Michel SERRES (**communication & interference**), Claude SHANNON (**communication & quantitative theory of information**), SKINNER (**behaviours**), Herbert SPENCER (**progress...**), TARSKY (**models theory**), Pierre TEILHARD DE CHARDIN (**mankind & cosmogenesis**), Paul VALERY (**models & modelling**), Ludwig VON BERTALANFFY (**allgemeine Systemlehre, systems general theory**), VON FOERSTER, (**information**), VON NEUMANN & MORGENSTERN (**games theory**), Norbert WIENER (**cybernetics**).

Paradoxically, we may begin with the second part of the book which describes various systems:

the atomic system, the cell system, the Earth system,

and various levels of organisation and application: **the ecosystems and the political ecology.**

The first part "**the systemic approach**" gives the definitions in the historic order, the key concepts and the graphic semiological bases of the description and the modelling of a system.