

# **COSMIC EVOLUTION: ERIC CHAISSON'S GRAND THEORETICAL SYNTHESIS**

Comprising, in his words, “all developmental and generational changes in the assembly and composition of radiation, matter, and life throughout the history of the universe.”

**EVOLUTION:** “a universal phenomenon ... a unifying principle throughout natural science”

**ENERGY:** “a common currency; energy density rate generally correlates with system complexity and may drive, at least in part, the process of evolution itself”

**ENERGY DENSITY RATE:** “(also termed power density) is the amount of energy flowing through a system per unit time and per unit mass”

**SELECTION and ADAPTATION:** “ubiquitous in Nature; the emergence, maintenance, and fate of all complex systems are often determined, again partly, by their ability to utilize energy”

“systems adversely affected by too much or too little energy are non-randomly eliminated”

“Using Complexity Science to Search for Unity,” *Complexity and the Arrow of Time*  
(2013) p. 78.