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Autore	Carta Silvio
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Sommario/riassunto	The twentieth century is replete with scientific and mathematical discoveries that have profoundly changed our world view. In physics, within a mere century, our view of the cosmos changed from a classical (Newtonian) to a relativistic one following Einstein's relativity theory in the early 1900s. In mathematics, Hilbert's faith in the closure of formal axiom systems fell apart with Godel's incompleteness theorem in the 1930s. Out of these ashes of lost deterministic foundations arose the sciences of complex systems, first in the study of non-equilibrium thermodynamics (under the intellectual leadership of Ilya Prigogine in Brussels) and later, in broader interdisciplinary terms, in New Mexico with the establishment of the Santa Fe Institute. Interestingly, a core element of this new paradigm-the notion of emergence-reflects the passage of the sciences and mathematics from a focus on closed and deterministic systems to open and dissipative systems where order, structure or patterns arise seemingly out of nowhere (at least as far as initial and boundary conditions are concerned).

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