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Sommario/riassunto	This book surveys the science at a semipopular, Scientific American-level. It is even-handed with regard to competing directions of research and philosophical positions. It is hard to get even two people to agree on anything, yet a million billion water molecules can suddenly and abruptly coordinate to lock themselves into an ice crystal or liberate one another to billow outwards as steam. The marvelous self-organizing capacity of matter is one of the central and deepest puzzles of physics, with implications for all the natural sciences. Physicists in the past century have found a remarkable diversity of phases of matter—and equally remarkable commonalities within that diversity. The pace of discovery has, if anything, only quickened in recent years

with the appreciation of quantum phases of matter and so-called topological order. The study of seemingly humdrum materials has made contact with the more exotic realm of quantum gravity, as theorists realize that the spacetime continuum may itself be a phase of some deeper and still unknown constituents. These developments flesh out the sometimes vague concept of the emergence—how exactly it is that complexity begets simplicity.
