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Nota di contenuto	pt. I. The notions of complexity and emergence. 1. What is complexity? / E. Agazzi -- 2. On levels and types of complexity and emergence / H. Lenk and A. Stephan -- 3. Formal metatheoretical criteria of complexity and emergence / C.U. Moulines -- 4. Beyond reductionism and holism. The approach of synergetics / B. Kanitscheider -- 5. Kolmogorov complexity / J. Mosterín -- 6. Modèles de structures Émergentes dans les systèmes complexes / J. Petitot -- pt. II. Complexity and emergence in natural science. 7. Emergence in physics: the case of classical physics / R. Omnès -- 8. Classical properties in a quantum-mechanical world / A. Cordero -- 9. Reduction, integration, emergence and complexity in biological networks / J. Ricard -- pt. III. The emergence of the mind. 10. Complexity and the emergence of meaning: toward a semiophysics / F.T. Arecchi -- 11. Complexity and the emergence of intentionality: some misconceptions / M. Casartelli -- 12. Can supervenience save the mental? / L. Montecucco -- 13. From complexity levels to the separate soul / G. Del Re.
Sommario/riassunto	Complexity has become a central topic in certain sectors of theoretical physics and chemistry (for example, in connection with nonlinearity and deterministic chaos). Also, mathematical measurements of complexity and formal characterizations of this notion have been proposed. The question of how complex systems can show properties that are

different from those of their constituent parts has nurtured philosophical debates about emergence and reductionism, which are particularly important in the study of the relationship between physics, chemistry, biology and psychology. This book offers a good presentation of those topics through a truly interdisciplinary approach in which the philosophy of science and the specialized topics of certain sciences are put in a dialogue.

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