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Collana	Biosemiotics, , 1875-466X ; ; 25
Disciplina	570.1 570.14
Soggetti	Biology - Philosophy Semiotics Social sciences Humanities Phenomenology Life sciences Philosophy of Biology Humanities and Social Sciences Life Sciences Semiòtica Biologia Filosofia de la ciència Llibres electrònics
Lingua di pubblicazione	Inglese
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Note generali	Includes index.
Nota di contenuto	Chapter1. Introduction -- Chapter2. Historical Overview of Developments of the Notion of Agency -- Chapter3. Human Agency -- Chapter4. Agency in Non-Human Organisms -- Chapter5. Origins of Life -- Chapter6. Conceptualizing Agency -- Chapter7. Semiosis -- Chapter8. Semiogenesis -- Chapter9 Phenomenology -- Chapter10. Composite Agency and Semiotics of Modularity -- Chapter11. Human Agency and Ecology -- Chapter12. Agentology: Crosspollination of Science and Philosophy.

This book invites readers to embark on a journey into the world of agency encompassing humans, other organisms, cells, intracellular molecular agents, colonies, populations, ecological systems, and artificial autonomous systems. We combine mechanistic and non-mechanistic approaches in the analysis of the function and evolution of organisms, their subagents, and multi-organism systems, and in this way offer a theoretical platform for integrating biosemiotics with both natural science and the humanities/social sciences. Agents are autonomous systems that incorporate knowledge on how to make sense of their environment and use it to achieve their goals. The functions of all agents are supported by mechanisms at the lowest level; however, the explanatory power of mechanistic analysis is not sufficient for complex agents. Non-mechanistic methods rely on the goal-directedness of agents whose dynamics follow self-stabilized dynamic attractors. The properties of attractors depend on stable or slowly changing factors, and such dependencies can be interpreted as sign relations if they are adaptive in nature. Agents can replace or redirect mechanisms on demand in order to preserve their functions; for performing higher-level semiotic functions, mechanisms are thus only means. We assume that mechanism and semiosis are not mutually exclusive, and that simple agents can interpret signs mechanistically. This assumption allows us to extend semiotic analysis to all agents, including ribosomes in cells, computers, and robots. This book challenges established traditions in natural science and the humanities/social sciences: semiotics no longer appears as restricted to humans and rational thinking, and biology is no longer limited to rely exclusively on mechanistic reasoning.
