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Titolo	The Demons of Science : What They Can and Cannot Tell Us About Our World // by Friedel Weinert
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Soggetti	Physics Philosophy and science Cosmology History and Philosophical Foundations of Physics Philosophy of Science Popular Science in Physics
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	I. Thought Experiments: Thought Experiments in Ancient Greece -- What Thought Experiments Represent -- Models and Thought Experiments -- The Function of Thought Experiments -- What Thought Experiments Tell Us and Don't Tell Us About the World -- Enter the Demons -- II. Laplace's Demon: Laplace's Demon: Causal and Predictive Determinism -- Causality, Determinism and the Block Universe -- The Time-Reversal Invariance of Fundamental Laws -- Determinism and Its Implications -- Determinism and Free Will -- What Laplace's Demon Tells Us and Does not Tell Us About the World -- III. Maxwell's Demon: Local and Cosmic Arrows of Time -- Maxwell's Demon -- Loschmidt's Demon: Reversibility and Irreversibility -- Indeterminism -- Indeterminism and Free Will -- Entropy -- The Past-Future Asymmetry -- What Maxwell's Demon Tells Us and Does not Tell Us About the World -- IV. Nietzsche's Demon: The Eternal Recurrence of Events -- Landsberg's Demon -- Physical and Phenomenal Time -- The Evolution of the Universe -- Time and Change -- Is There a Master Arrow of Time? -- What Landsberg's Demon Tells Us and Does not Tell Us About

the Arrows of Time. .

Sommario/riassunto

This book is the first all-encompassing exploration of the role of demons in philosophical and scientific thought experiments. In Part I, the author explains the importance of thought experiments in science and philosophy. Part II considers Laplace's Demon, whose claim is that the world is completely deterministic. Part III introduces Maxwell's Demon, who - by contrast - experiences a world that is probabilistic and indeterministic. Part IV explores Nietzsche's thesis of the cyclic and eternal recurrence of events. In each case a number of philosophical consequences regarding determinism and indeterminism, the arrows of time, the nature of the mind and free will are said to follow from the Demons's worldviews. The book investigates what these Demons - and others - can and cannot tell us about our world. .
