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Collana	The Frontiers Collection, , 1612-3018
Disciplina	003
Soggetti	Statistical physics Computational complexity Economic sociology Sociophysics Econophysics Economic policy Economics Phase transitions (Statistical physics) Applications of Nonlinear Dynamics and Chaos Theory Complexity Organizational Studies, Economic Sociology Data-driven Science, Modeling and Theory Building Political Economy/Economic Systems Phase Transitions and Multiphase Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Seneca's times: The fall of the Roman Empire -- The Seneca collapse as a critical phenomenon: why do things break? -- Networks: the Seneca collapse of complex structures -- Fast and Furious Seneca: Financial collapses -- Destroying what keeps you alive: the tragedy of the commons -- The World as a Giant Bathtub: the Seneca Collapse of Complex Systems -- World models and the collapse of everything -- The dark heart of the fossil empires -- Malthus was an optimist: famines and population collapses -- The Seneca asteroid:

climate change as the ultimate collapse -- Managing complex systems: how to pull the levers in the right direction -- Conclusion: How to euthanize an empire.

Sommario/riassunto

The essence of this book can be found in a line written by the ancient Roman Stoic Philosopher Lucius Annaeus Seneca: "Fortune is of sluggish growth, but ruin is rapid". This sentence summarizes the features of the phenomenon that we call "collapse," which is typically sudden and often unexpected, like the proverbial "house of cards." But why are such collapses so common, and what generates them? Several books have been published on the subject, including the well-known "Collapse" by Jared Diamond (2005), "The collapse of complex societies" by Joseph Tainter (1998) and "The Tipping Point," by Malcolm Gladwell (2000). Why The Seneca Effect? This book is an ambitious attempt to pull these various strands together by describing collapse from a multi-disciplinary viewpoint. The reader will discover how collapse is a collective phenomenon that occurs in what we call today "complex systems," with a special emphasis on system dynamics and the concept of "feedback." From this foundation, Bardi applies the theory to real-world systems, from the mechanics of fracture and the collapse of large structures to financial collapses, famines and population collapses, the fall of entire civilizations, and the most dreadful collapse we can imagine: that of the planetary ecosystem generated by overexploitation and climate change. The final objective of the book is to describe a conclusion that the ancient stoic philosophers had already discovered long ago, but that modern system science has rediscovered today. If you want to avoid collapse you need to embrace change, not fight it. Neither a book about doom and gloom nor a cornucopianist's dream, The Seneca Effect goes to the heart of the challenges that we are facing today, helping us to manage our future rather than be managed by it. "The Seneca Effect" is probably the most important contribution to our understanding of societal collapse since Joseph Tainter's 1988 masterpiece, "The Collapse of Complex Societies." Since we live in a society that is just in the process of rounding the curve from growth to decline, this is information that should be of keen interest to every intelligent person. Richard Heinberg, Senior Fellow, Post Carbon Institute, Author, The End of Growth Why do human societies collapse? With today's environmental, social and political challenges it is a question that is more than academic. What can we learn from history? How can we avoid the pitfalls? In this fascinating, well written book, Ugo Bardi provides many of the answers. Here is a book to feast on, to devour and be stimulated by, a book packed full of insights and ideas which will leave the reader satisfied, curious and stimulated. Simply wonderful. Graeme Maxton, Secretary General of the Club of Rome.
