

The Earth that sustains us today was born out of a few remarkable, near-catastrophic revolutions, started by biological innovations and marked by global environmental consequences. The revolutions have certain features in common, such as an increase in the complexity, energy utilization, and information processing capabilities of life. This book describes these revolutions, showing the fundamental interdependence of the evolution of life and its non-living environment. We would not exist unless these upheavals had led eventually to 'successful' outcomes—meaning that after each one, at length, a new stable world emerged.

The current planet-reshaping activities of our species may be the start of another great Earth system revolution, but there is no guarantee that this one will be successful. This book explains what a successful transition through it might look like, if we are wise enough to steer such a course.

This book places humanity in context as part of the Earth system, using a new scientific synthesis to illustrate our debt to the deep past and our potential for the future.

Tim Lenton is a Professor of Earth System Science at the University of Exeter.
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'An exciting, timely, scholarly, and innovative book.'
Tyler Volk, New York University

'Lenton and Watson's thought-provoking book is the latest in a distinguished line of works that have altered our perception of the planet.'
Wolfgang Lucht, *Nature*

'Lenton and Watson have written a remarkable and timely book which is both entertaining and impeccably researched—from the beginning I felt both engaged and enlightened. . . . With its academic rigour and, at the same time, its accessibility, the authors have clearly succeeded in their aim of writing scholarly popular science. As such, it should inspire us to learn from how the Earth system has evolved in the past and face up to the final question: Are we as yet sufficiently grown up to take responsibility for a whole planet? One thing is for sure: Over the next century we will find out.'
Peter Horton, *Chemistry World*

Cover image: Gaia rising up from the Earth to plead with the god Poseidon for the life of her son Polybotes. Detail from a vase, ca 410–400 BC, held in the Antikensmuseum, Berlin, Germany.
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