

The Age of Resilience: Reimagining Existence on a Rewilding Earth

**A sweeping new interpretation of the history of civilization
and a transformative vision of how our species will thrive on a rewilding Earth**

TABLE OF CONTENTS

Introduction

Part One EFFICIENCY VS . ENTROPY: THE DIALECTIC OF MODERNITY

1. Masks, Ventilators, and Toilet Paper: How Adaptivity Trumps Efficiency
2. Taylorism and the Laws of Thermodynamics
3. The Real World: Nature's Capital

Part Two PROPERTIZING THE EARTH AND PAUPERIZING THE WORKFORCE

4. The Great Disruption: The Planetary Enclosure of Time and Space
5. The Ultimate Heist: Commodifying the Earth's Spheres, Gene Pool, and Electromagnetic Spectrum
6. The Catch-22 of Capitalism: Increased Efficiency, Fewer Workers, and More Consumer Debt

Part Three HOW WE GOT HERE: RETHINKING EVOLUTION ON EARTH

7. The Ecological Self: We Are Each a Dissipative Pattern
8. A New Origin Story: The Biological Clocks and Electromagnetic Fields That Help Synchronize and Shape Life
9. Beyond the Scientific Method: Complex Adaptive Social/Ecological Systems Modeling

Part Four THE AGE OF RESILIENCE: THE PASSING OF THE INDUSTRIAL ERA

10. The Resilient Revolution Infrastructure
11. The Ascendance of Bioregional Governance
12. Representative Democracy Makes Way for Distributed Peerocracy
13. The Rise of Biophilia Consciousness

Acknowledgments

Notes

Index

Additional PRAISE FOR *THE AGE OF RESILIENCE*

“The most striking feature of our multifaceted economic, social, and ecological global crisis is that none of our major problems can be understood in isolation. They are interconnected and interdependent and require corresponding systemic solutions. Jeremy Rifkin has designed effective systemic solutions to economic and technological problems at the request of governments and business organizations around the world for more than forty years. In this book he uses his rich experience to address the crisis of perception that threatens our species' future survival on earth.

Rifkin argues that we are on the cusp of a profound cultural transformation from linear, mechanistic, and reductionist thinking to systemic, ecological, and life-oriented thought and values: a transition from the Age of Progress to the Age of Resilience. This is a challenging, thought-provoking, yet deeply hopeful book. I recommend it warmly to anyone concerned about the future of humanity.”

-- **Fritjof Capra**, Theoretical Physicist and coauthor *The Systems View of Life*

“Jeremy Rifkin’s *Age of Resilience* takes us through the long history of illusions, culminating in the Age of Progress, by which we came to think of ourselves as both separate from nature and masters of the Earth. He asks us to reconsider how our obsession with unlimited growth and hyper efficiency - by which we measure progress - has ruptured the web of life and taken us and our fellow creatures to the very brink of a mass extinction. Rifkin helps us remember that we are an intimate part of an animate nature with the hope that we will rejoin our evolutionary family on an indivisible Earth. In these times of despair and hopelessness, Rifkin points to regenerativity, flourishing, resilience, and hope for the future.”

-- **Dr. Vandana Shiva**, feminist, ecologist, and activist

“At a moment when humanity’s obsession with “efficiency” has led us to the doorstep of cascading biodiversity loss and a catastrophic climate crisis, Jeremy Rifkin guides us toward an alternate future sparked by a prophetic vision of the Age of Resilience. Humanity’s window of opportunity to act on climate change is rapidly narrowing. With this in mind, Rifkin calls on humanity to engage in a deep self-examination of its relationship to nature in order to strengthen our bonds with our earthly home. This is the only path toward building a resilient world prepared to take on this century’s challenges.”

-- **Ani Dasgupta**, President & CEO, World Resources Institute

“Jeremy Rifkin has given us a vision of the future that can inspire all those who want to be agents of change. He invites us to go beyond the idea of progress, and embrace a holistic and ecological conception of our existence on Earth. In the new era, empathy and biophilia take center stage for our reaffiliation with nature”.

--**Carlo Petrini**, Founder and President of Slow Food International

PAST PRAISE FOR JEREMY RIFKIN'S BOOKS

"Once again, Jeremy Rifkin has wrapped his brilliant mind around humanity's greatest challenges and makes a compelling case for ending business as usual. *The Green New Deal* is a clear roadmap for the post-carbon transformation of the US economy and an inspiring vision of what could be the most promising economic opportunity of our lifetimes. It's a must-read for investors, entrepreneurs, and policy makers alike."

—Sir Richard Branson

"Jeremy Rifkin is the economic and ecological worldwide ambassador of the energy transition...he presents a grand scenario for the future: a visionary approach unlike anyone has dared to put forward in the last fifty years. *The Green New Deal* is a must-read...for grassroots movements and policymakers in Europe and the United States alike!"

—Sigmar Gabriel, former Vice Chancellor and Federal Minister for Foreign Affairs of Germany

"Admirable in its scope...what makes *The Zero Marginal Cost Society* worth reading is its audacity, its willingness to weave a vast string of developments into a heartening narrative of what our economic future may hold for the generations to come."

– Fortune

"This breathtaking book [*The Zero Marginal Cost Society*] connects some of today's most compelling technology-driven trends into a five-hundred-year spiral from commons to capitalism and back. Rifkin has produced an intellectual joyride that takes us to the threshold of a new economic order."

– Kevin Werbach, The Wharton School

"[*The Third Industrial Revolution is*] Impeccably argued...a compelling and cogent argument to overhaul our society and economy in favor of a distributed and collaborative model."

– Publisher's Weekly

"[*The Third Industrial Revolution*] is a remarkable piece of work from one of the foremost thinkers of our time...Rifkin has come up with a visionary and innovative economic development model that ensures the sustainability of our natural resources and ecosystems."

– Rajendra K. Pachauri, former Chairman of the United Nations Intergovernmental Panel on Climate Change

As he does in all of his work, Rifkin really swings for the fences in *The Empathic Civilization*, challenging us all to rise above the clutter of our daily lives, and explore life's larger questions. He is that rare breed, one whose disappearance is often and rightly bemoaned: a public intellectual. Or, as the New York Times once called him: "a social and ethical prophet"... A brilliant read and offering a vitally important perspective.

– Arianna Huffington

A SELECTION OF JEREMY RIFKIN'S WORK OVER 50 YEARS ON CLIMATE CHANGE AND TRANSFORMING THE GLOBAL ECONOMY, SOCIETY, AND GOVERNANCE

Highlights 1972 - 2022

In 1973, Jeremy Rifkin organized a mass protest against global oil companies at the commemoration of the 200th Anniversary of the Boston Tea Party at the Boston Harbor. The protest came in the wake of the increase in gasoline prices in the fall of 1973, following the OPEC oil embargo. 20,000 New Englanders joined the protest, as activists dumped empty oil barrels into Boston's Harbor with chants of "Impeach Exxon" and "Dirty oil, polluted world," initiating what *The New York Times* would call the "Boston Oil Party of 1973". This was the first protest in America against the giant oil companies.

In 1980, Jeremy Rifkin and Ted Howard co-authored the book *Entropy: A New World View*, the first publication to report on a US National Academy of Sciences study published months earlier, warning of the potential environmental impacts of global warming emissions. In *Entropy*, Rifkin and Howard called for a green transition into solar energies and other green technologies in regions across the world to address climate change.

In 1988, Rifkin brought together climate scientists and environmentalists from 35 nations in Washington, D.C. for the first meeting of The Global Greenhouse Network. The coming together of climate scientists and green activists marked the beginning of a collaboration between researchers and activists to warn the world of the coming climate crisis and to champion the green initiatives that would be needed to decarbonize the global economy and usher in an ecological era.

In 1989, Rifkin launched a green coalition of the nation's youth service organizations, school associations, religious denominations, and public interest groups around global warming education and activism in the US capital with thirty members of the US House of Representatives and Senate in attendance lending their support to this first-of-its-kind nationwide initiative.

In 1989, Rifkin gave a series of Hollywood lectures on global warming and related environmental issues for a diverse assortment of film, television and music industry leaders, with the goal of organizing the Hollywood community to use its visibility to bring public attention to global warming. Shortly thereafter, two Hollywood environmental organizations, Environmental Media Association (EMA), initiated by Norman Lear, and Earth Communications Office (ECO), initiated by Bonnie Reiss, were formed.

In 1990, the *Foundation on Economic Trends* published *The Green Lifestyle Handbook: 1001 Ways You Can Heal the Earth*, one of the first popular publications to educate the public on lifestyle changes and activist initiatives to advance green alternatives to a fossil fuel culture.

In 1992, Rifkin and his wife, Carol Grunewald, published the book *Voting Green*, among the first publications to encourage voters to become personally engaged in electoral campaigns at the local, state, and national level to create a green political agenda in America.

In 1992, Rifkin authored the book, *Beyond Beef: The Rise and Fall of the Cattle Culture*, the first book to expose the impact that cattle have on global warming emissions and climate change. In 1993, Rifkin launched the Beyond Beef Campaign, a coalition of six environmental groups including Greenpeace, Rainforest Action Network, and Public Citizen, with the goal of encouraging a 50% reduction in the consumption of beef, arguing that methane emissions from cattle have a warming effect 23 times greater than carbon dioxide.

In the early 2000s, Rifkin began working with the European Commission, the European Parliament, and heads of state across the EU on climate change and accompanying legislation to transition Europe into a post carbon green future. He has served as a principal advisor to the past three presidents of the European Commission - Romano Prodi, Jose Manuel Barroso, and Jean-Claude Juncker – on climate change and the transition into a Third Industrial Revolution green era. Mr. Rifkin is currently advising the European Commission under the leadership of Ursula von der Leyen.

In 2002, Rifkin authored the book, *The Hydrogen Economy*. Soon after, Mr. Rifkin, who at the time served as an advisor to Romano Prodi, then President of the European Commission, developed a strategic white paper committing the European Union to a multi-billion Euro research and development plan that would transform the EU into a green hydrogen economic paradigm. Mr. Rifkin joined Prodi at a European Union conference in October 2002 to announce, "a coordinated long-term plan for Europe to make the transition from fossil-fuel dependency to become the first "hydrogen economy" superpower of the 21st century". President Prodi remarked that the EU hydrogen R&D initiative would be as significant for the future of Europe as the space program was for the U.S. in the 1960s and 1970s.

In 2003, Rifkin began working both in the U.S. and Europe to advance the political cause of renewably generated green hydrogen. In the US, Rifkin was instrumental in founding the Green Hydrogen Coalition, consisting of 13 environmental and political organizations (including Greenpeace and MoveOn.org) committed to building a renewable hydrogen-based economy.

In 2007, Rifkin spearheaded the historic 20-20-20 Resolution, passed by the European Parliament, to support the European Commission's effort to commit EU member states to mandatory requirements for decarbonizing their economy and ushering in green energies and ecologically sustainable technologies and business practices. The European Commission subsequently passed the 20-20-20 formula into law.

Mr. Rifkin is President of TIR Consulting Group, LLC, made up of some of the leading companies in the world advancing a green, zero-emission economic transformation. Between 2010 and 2021, his team was commissioned by nine regional governments in the United States and Europe to assist in the conceptualization, build-out, and scale-up of comprehensive Third Industrial Revolution roadmaps to transition their societies into zero emission Third Industrial Revolution economies.

In 2011, Rifkin published *The Third Industrial Revolution; How Lateral Power is Transforming Energy, the Economy, and the World*. The book was a New York Times best-seller, and has been translated into 19 languages.

In December 2012, the Xinhua News Agency reported that Premier Li Keqiang had read *The Third Industrial Revolution* and had instructed the National Development and Reform Commission and the Development Research Center of the State Council to read it and follow up with a thorough study of the ideas and themes it puts forth. Rifkin traveled to China between 2013 and 2017, meeting with Vice Premier Wang Yang and other top government officials on transitioning China into a smart zero-emission Third Industrial Revolution. In November 2015, *The Huffington Post* reported that "Chinese Premier Li Keqiang has not only read Jeremy Rifkin's book, *The Third Industrial Revolution*, and taken it to heart. He and his colleagues have also made it the core of the country's thirteenth Five-Year Plan." By 2014, 550,000 copies of *The Third Industrial Revolution* were in print in China alone.

Rifkin currently advises the China Center of Information and Industry Development (CCID) of the Ministry of Industry and Information Technology (MIIT) in the conception and deployment of the China "Internet Plus" Digital infrastructure across Chinese industries. Mr. Rifkin also serves on the International Advisory Board of the Institutes of Science and Development at the Chinese Academy of Sciences (CAS).

In a profile in 2015, EurActiv stated that "Jeremy Rifkin is an American economist and author who's best-selling Third Industrial Revolution arguably provided the blueprint for Germany's transition to a low-carbon economy, and China's strategic acceptance of climate policy."

Bloomberg reported that "at a 2015 United Nations conference, President Xi Jinping proposed Rifkin's vision of a global, integrated energy internet. Language and ideas from Rifkin's books marked the government's two five-year economic plans since. When the industry ministry launched a Digital Silk Road to accompany China's Belt and Road Initiative [in 2017], [Rifkin] was drafted to write the foreword."

On January 31, 2017, the European Central Bank hosted a conference on the theme "Into the Future: Europe's Digital Integrated Market". Rifkin delivered a keynote address on transforming the European Union into a smart third industrial revolution paradigm.

In 2017, Vice Media debuted a feature-film starring Jeremy Rifkin at the Tribeca Film Festival entitled *The Third Industrial Revolution: A Radical New Sharing Economy*. The film is subtitled in 19 languages and has over 7.2 million views.

In 2020, Rifkin was a recipient of the 13th annual German Sustainability Award for his work on addressing climate change. The award was presented to Mr. Rifkin in a laudatory address by Sigmar Gabriel, the former Foreign Minister, Vice-Chancellor, Economic Minister, and Environmental Minister of Germany.

Jeremy Rifkin and TIR Consulting Group, LLC and partners published a \$16 trillion, twenty-year America 3.0 Resilient Infrastructure plan, prepared at the request of Senate Majority Leader Charles Schumer and first released by *Bloomberg* on July 29, 2021, in an article entitled "Energy Guru is Beyond Disappointed with Dwindling US Infrastructure Plan". The America 3.0 infrastructure transformation 2022-2042 – made public by *Bloomberg* – details a massive investment to scale, deploy, and manage a smart digital zero-emission Third Industrial Revolution infrastructure for a 21st century economy. Rifkin's blueprint, noted Senator Schumer, "underscores the need to pass big, bold solutions to address climate change through investments in our infrastructure". Many of the proposals and initiatives outlined in the Schumer plan were incorporated in the final infrastructure plan passed by the US Congress and signed into law by President Biden in 2021.