

## AN EMPIRE OF THINGS: AN ECOLOGICAL RESPONSE

By Roy Morrison

*Editor's Note: Roy Morrison's latest book is "Sustainability Sutra: An Ecological Investigation."* <sup>1</sup>Morrison argues for a transition to ecological civilization using market mechanisms and pursuing a global growth strategy with a focus on sustainability. He proposes ecological consumption taxation, new market rules, fiscal and monetary policies, and investment strategies. Morrison's website is [EcoCivilization.info](http://EcoCivilization.info).

Is there a saving ecological response possible to the *Empire of Things*,<sup>2</sup> the fevered consumerist trajectory traced by Frank Trentmann raging not only in shopping malls across America, but now in China and India?

I believe there is a clear path to escape ecological catastrophe as a consequence of both our proclivities for consumption and the enormous infrastructure requirements that support them. Simply put, economic growth in the 21st century must mean ecological improvement.

This is not an easy task. But, once examined, what's needed are two basic changes in business and pollution as usual. The good news is that these changes do not require an end to global desire for *more*, both in terms of individual consumption and the generation of profit.

We've made two logical mistakes that have made it hard to see other possible outcomes. First, the fact that the history of economic growth has meant increasing pollution, depletion, and ecological damage under existing market rules, law, and practices does not mean that an alternative set of market rules, laws, and practices cannot lead to sustainable ends.

Second, consumption to our heart's delight is not limited to material objects. Consumption can follow a different path and continue almost limitlessly in information--in dematerialized software, data, entertainment, virtual reality, services, social networks, relationships that are already the high profit centers of the 21st century.

The largest corporations by market capitalization in the US stock market in 2016 are Apple, Google, Microsoft, Amazon and Facebook. The most money to be made comes from selling next to nothing. The marginal ecological consequences of the consumption of one more immaterial product via a renewably powered web is similarly next to nothing. We can find our

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<sup>1</sup> Roy Morrison, *Sustainability Sutra: An Ecological Investigation* (New York: Select Books, 2017).

<sup>2</sup> Frank Trentmann, *Empire of Things: How We Became a World of Consumers, from the Fifteenth Century to the Twenty-First*. New York: Harper Collins, 2017). Amazon describes this book as follows: In *Empire of Things*, Frank Trentmann unfolds the extraordinary story of our modern material world, from Renaissance Italy and late Ming China to today's global economy. . . . With an eye to the present and future, Frank Trentmann provides a long view on the global challenges of our relentless pursuit of more—from waste and debt to stress and inequality. A masterpiece of research and storytelling many years in the making, *Empire of Things* recounts the epic history of the goods that have seduced, enriched and unsettled our lives over the past six hundred years.

wants satisfied by unearthly delights. Greed and gluttony and envy now serving sustainable ends.

Economic growth can result in both profit and ecological improvement, the health and regeneration of natural capital as well as the growth of finance capital. To take one clear example, the global transformation to an efficient, renewable energy system to replace all fossil fuels and nuclear energy will require many trillions of dollars in productive and profitable investment and lead to enormous, and desperately needed ecological improvement, which will save us from climate catastrophe.

Similar profitable and just in time ecological regimes to prevent catastrophe can be instituted for agriculture, forestry, fisheries, aquaculture, ecological industrial production based on zero waste and zero pollution where all outputs become inputs for other processes.

The problems we face are not essentially technical, but political. Market rules, laws, commercial codes, consumer customs must mean that sustainable products become less expensive, gain market share, and become more profitable, while unsustainable products become more expensive, lose market share, and become less profitable. A range of ecological taxes, for example, an ecological value added tax placed on all goods and services, can send clear sustainable price signals throughout the economy and be combined with a negative income tax to mitigate the regressive effects of consumption taxes. Yes this means that politically the power of polluters must be overcome and ecological norms must be embraced or our market system and our civilization will destroy itself.

Laws can mandate yearly reduction in the amount of pollutants, such as carbon dioxide, for example, to reach a global sustainable level of around 21 gigatons carbon dioxide a year. In personal terms, this is about 3 tons of carbon dioxide per person per year globally (for a 7 billion population).<sup>\*</sup> We'd also need to remove carbon from the atmosphere and sequester it in soil and biomass to return to the 300 parts per million carbon dioxide range, for example, by using CoolTerra biocarbon technology.<sup>3</sup>

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<sup>\*</sup> *Editor's note:* According to the latest United Nations Environmental Program's latest Emissions Gap Report, annual CO<sub>2</sub> emissions of 21 gigatons is not sustainable over the long run, though 21 gigatons is well below current annual emissions of over 40 gigatons. This report states that to have a 50% chance of keeping global warming below 1.5°C in 2100, total greenhouse gas emissions (CO<sub>2</sub>, NO<sub>x</sub>, methane and fluorinated gases) would need to be 8 gigatons in 2050 and -5 gigatons in 2100. The report states that to have a 66% chance of keeping global warming below 1.5°C in 2100, total greenhouse gas emissions (CO<sub>2</sub>, NO<sub>x</sub>, methane and other) would need to be 23 gigatons in 2050 and -3 gigatons in 2100. UNEP, *Emissions Gap Report 2016*, available at <http://www.unep.org/emissionsgap/> (accessed May 19, 2017). According to the US Environmental Protection Agency, CO<sub>2</sub> accounts for about 75% of total greenhouse gases. USEPA, "Global Greenhouse Gas Emissions Data," available at <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data> (accessed May 19, 2017). Morrison proposes more carbon removal than does the *Emissions Gap Report*.

<sup>3</sup> "Cool Terra® products are engineered to improve soil health, reduce water consumption and help optimize fertilizer use while sequestering substantial amounts of carbon. The highly porous physical structure of

To make this happen we need to take advantage of zero pollution renewable technologies and second law of thermodynamics efficiency improvements. And we each need to understand our personal, neighborhood, city, state, and national levels of carbon dioxide emissions and how we can reduce them over time to sustainable levels. According to the World Bank, the global average is now under 5 metric tons per person of carbon dioxide per person per year; in China it is 7.6 tons; and in the US it is 16.4 tons.<sup>4</sup>

To accomplish the transformation from our world of ruinous consumption toward sustainability will require a comprehensive embrace of new market rules, laws, codes, and customs. This must include the transfer of capital and information and investment by the rich nations to poor nations. The Chinese new Silk Road efforts, One Belt and One Road, for trade, financing, and investment in Asia, including HVDC renewable grid energy transmission, supported by \$40 billion from the Chinese Silk Road Fund and \$100 billion from the Asia Infrastructure Development Bank are examples of steps in the right direction.<sup>5</sup>

The ice is melting. Temperature and the seas are rising. Carbon dioxide is now over 400 parts per million in the atmosphere. Water is now bubbling up in the streets of Miami at high tide. Coral reefs are bleached white and perishing from warming oceans. Unfortunately, what is happening relatively slowly today is not a guide for tomorrow.

At a certain point, just enough carbon dioxide in the atmosphere, combined with methane from melting permafrost, and an ice free Arctic Ocean in the summer will mean that climate change will become accelerated and non-linear. If this happens, we will find ourselves struggling to survive in a new climate. The great processes of sustainability, of co-evolution between biosphere and planet in response to all influences that helps create and maintain conditions maximally favorable for all life will mean that life will survive yet another mass extinction and once again thrive. Whether humanity is one of those favored species is an open question. What is beyond doubt is that global civilization as we have known it will not survive if we do not take steps to mitigate the extent of climate catastrophe by changing our polluting ways before it is too late.

We can build a global order that is based on low pollution, high profit, and social justice where economic growth means ecological improvement and escape the worst consequences of an unmitigated Empire of Things. Whether we do so is really up to all of us.

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Cool Terra also makes it a promising delivery system for microbials and nutritionals designed to enhance plant growth and productivity.” See <http://www.coolplanet.com/cool-terra/what-is-cool-terra/> (accessed May 19, 2017)

<sup>4</sup> The World Bank, “CO2 Emissions,” available at <http://data.worldbank.org/indicator/EN.ATM.CO2E.PC> (accessed May 21, 2017).

<sup>5</sup> For more on this see Tian Jinchun, ‘One Belt and One Road’: Connecting China and the World (McKinsey & Company, 2016), available at <http://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/one-belt-and-one-road-connecting-china-and-the-world> (accessed May 21, 2017).