

The Great Simplification Animated Movie Transcript Part 1:

The world to come will be different from our expectations.

The arc of human history informs the trajectory of our future.

We need to know who we are and how we got here: The ecology, biology, and physics to know which paths remain open to us -and which lead to dead-ends.

4.5 billion years ago, stardust coalesced to form a planet. A billion years later, simple life emerged. By 500 million years ago, a profusion of LIFE had exploded on our blue green planet. Fast forward to 66 million years ago and dinosaurs were taken out by our planet's most recent mass extinction and small shrew-like survivors continued an evolutionary line that would eventually become.... Us.

Of all our hominid ancestors, one species would ultimately remain. Homo sapiens a creature variously curious, creative, kind, cruel, cooperative, competitive, combative, and clever.

When Earth's climate warmed and stabilized around 10,000 years ago, Homo sapiens tribes who pivoted en masse to agriculture and pastoralism out-reproduced their hunter gatherer cousins. Unbeknownst to them, (and to most of us) this was a planet changing event.

Sustained by new agricultural surplus, these early humans slowly spread out around the globe expanding trade and technology. For thousands of years, the average annual growth in the size of the human economy would be unnoticeable from one generation to the next.

By the 16th century however, more complex social organization and advanced navigational technology kickstarted a unique period in human history. Yet even with these advances, Human cultures remained powered by biomass and the muscles of humans and our draft animals, limiting growth. Until in the early 19th century, 10,000 years after the agricultural revolution, humans discovered how to extract fossil energy and materials from under Earth's surface to boost their economies

This new discovery of geologically 'stored sunlight' in the form of coal oil and gas changed everything. For the first time, human and animal labor played second fiddle to the power of these new energy sources. When combined with a machine, a gallon of gasoline could output the same work in a few minutes as a person laboring for an entire month.

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We increasingly replaced manual human tasks with machines, at a tiny fraction of the cost. The result: higher profits, higher wages and cheaper goods. Sudden access to this bank account of stored carbon energy turbocharged our populations, access to goods, services, and technology and quadrupled our economic growth rate.

Yet Humanity's great acceleration was still ahead. In the latter half of the 20th century, with this new power source, and an upgrade from coal to higher quality liquid oil, the human economy's average growth rate doubled yet again, to now over 30x what it had averaged-during the last few thousand years.

Compared to a global labor force of around 5 billion real humans, the machines and work powered by access to buried carbon energy added the equivalent power of 500 billion human workers. Access to these fossil energies and materials brought billions more humans into existence and brought billions more out of poverty. And led to the creation of new myths, institutions, and expectations.

Our ancestors' lives were tightly linked to the natural flows of the Earth - the sun, the rain, and the soil. But during this moonshot of growth and consumption, our fundamental tether to nature was first neglected and then forgotten. The main inputs to our economies were now mostly free – we merely had to pay for the cost of their extraction, not the cost of their creation, their true worth, nor their pollution.

To our ancestors, the benefits from carbon energy would have appeared indistinguishable from magic. And, instead of appreciating this giant one time windfall, we developed stories that our newfound wealth and progress had emerged purely from human ingenuity.

...We had become Energy Blind...