Stepping back to focus on the longer term (talking about slowdown)
The End of the Great Acceleration—and Why it’s Good for the Planet, the Economy, and Our Lives

Danny Dorling
Friday 24th April 2020
British Sociological Association Annual Conference (on-line in a time of Covid19)
Covid-19 smoothed daily reported figures (note that deaths in care homes are included in France). Data up until April 17th. For seven large states.
The size of the world population over the last 12,000 years

Based on estimates by the History Database of the Global Environment (HYDE) and the United Nations. On OurWorldInData.org you can download the annual data.
This is a visualization from OurWorldInData.org, where you find data and research on how the world is changing.
Licensed under CC-BY-SA by the author Max Roser.
The 2017 UN population estimates suggested there will be over 11 billion by 2090. These are now thought by the UN to be overestimates.

Diseases spread by European conquest then slowed global population growth, up until 1870.
When both axes of the timeline are shown on a log scale, the various slowdowns that have occurred at different times become far more apparent. Estimates of global human population from before 1820 are especially unreliable.

The slowdown currently under way is the first that is not due to famine, plague, war, or conquest.

Spread of European empires in the 1820-50s.

Famine, plague, and the diseases brought to the New World from the old after 1492.

1919 influenza pandemic.
Before 1950 the statistics needed to estimate GDP were not collected systematically, so we have only a few global estimates for a few years before then.

The first acceleration of global economic growth came in the age of empire.
“Slowdown” Fig 16 Emissions 1960-2018

CO₂ EMISSIONS PER YEAR FROM FOSSIL FUEL/INDUSTRY (billions of tonnes)

Since 2015 acceleration has kicked in again.

By 2003 emissions were growing by a billion tonnes each year and almost by 1.5 billion by 2010.

Deceleration took place due to the oil price shock of the early 1970s and the global recession of the early 1980s.

FALLING RISING
ABSOLUTE CHANGE YoY (billions of tonnes of CO₂)
Graph includes confidence levels around the central estimate.
Crude oil prices peaked in 1990 (Gulf War) and in 1980 (Iran oil embargo). There is a remarkable correspondence between the years in which oil has risen most in price and the brief periods of slowdown in the rise of average world land and ocean temperatures since the mid-1970s.
This graph shows absolute change, not the percentage relative rises.

The equivalent of GDP per capita was higher in China than anywhere else in the world both 2,000 and 1,000 years ago and was still higher than that of the U.S. in 1700, but then hardly rose or fell until 1978.
“Slowdown” Fig 54 NASDAQ Stock Price 1971-2019

By February 2000 the index was forty-five times the 1971 starting point, and for two days, in March it was “worth” fifty times its initial value! Then came the first crash.
"Slowdown" Fig 56 World Graduates Share 1970-2014

This is a very crude estimate produced from UNESCO data. It is the number of people of all ages enrolled in tertiary education as a proportion of the five-year age group following on from secondary school-leaving age.

In 1970 almost no one in China (0.1%) and very few in India (under 5.0%) enrolled in tertiary education.

FALLING  RISING

ABSOlUTE CHANGE IN ENROLLMENT (% point change YoY)
The Living Planet Index is an aggregate estimate of biodiversity loss due to species extinction. The index begins in 1970 with that year set as zero because, before then, we had no systematic method of global recording.

The rate of global biodiversity loss fell abruptly after 1987, possibly due to enhanced attempts to protect species.

The rate of extinction of species is always slower at times of economic recession.
The International Civil Aviation Organization began collecting statistics on aircraft passengers in 1947 and show that by 2017 almost 4 billion seats were being booked and occupied on flights per year - however most people alive today have never flown and never will.


"Slowdown" Fig 62 World Air Passengers 1970-2017
"Slowdown" Fig 65 Tokyo Population and Suburban Growth 1920-2010

1950 the center grew faster.

1947-50

1920-25

2005-10

Mid-1940s wartime evacuation.

1940-47

Suburbanization in the 1970s.

Tokyo Skytree was built in the four years 2008–12
"Slowdown" Figure 67

Pendulum

Phase portrait

Falling
SLOWING DOWN
DECELERATING

ACCELERATING

POSITION

VELOCITY

Graphics by Kirsten McClure @orpheuscat
Conclusion - **Slowdown**: (The End of the Great Acceleration—and Why It’s Good for the Planet, the Economy, and Our Lives)

Great economic inequalities will be hard to sustain during and following slowdown. As things change less, it will become much more difficult to make money out of a shrinking and aging population who may also become savvier and harder to fool with the allure of the “new”.

Slowdown means goods lasting longer; it means less waste. It means that many of the things that we currently think of as great social and environmental problems will not be problematic in future. We will, of course, have new problems—most of which we cannot even imagine right now.