

# **UNDERSTANDING GLOBALIZATION**

## Chapter 4 of How The World Really Works (Part 1)

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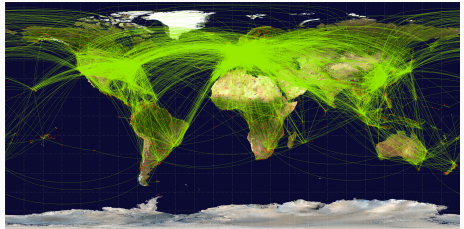
Wenyun Zuo

Feb 23, 2023

Smil Book Club

# ENGINES, MICROCHIPS AND BEYOND

- **Goods:** merchandise
- **People:** tourists
- **Money:** investment
- **Information:** communication



World airline route map 2009, By Jpatokal - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=712735>

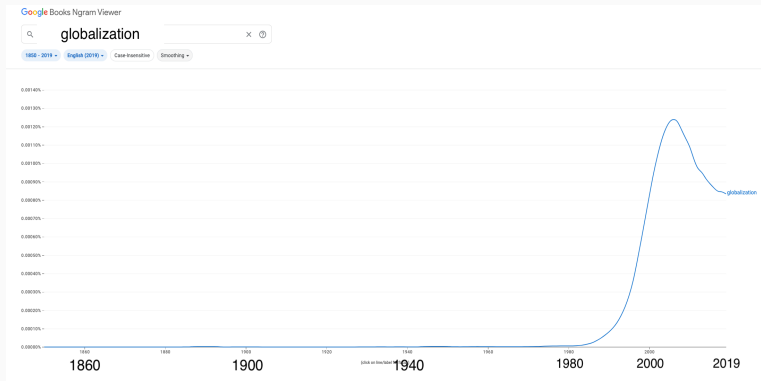
Globalization is not a historical inevitability preordained by economic and social evolution

- human construct
- growing consensus on readjustment
- the retreat during 1913-1950 (due to the inequality of global economy before WWI<sup>1</sup>)
- the intensive globalization was challenged (1973 and 1979 oil crisis)

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<sup>1</sup>Williamson, JG. 1997. Globalization and inequality, past and present. The World Bank Research Observer. 12(2): 117-135.

# ENGINES, MICROCHIPS AND BEYOND



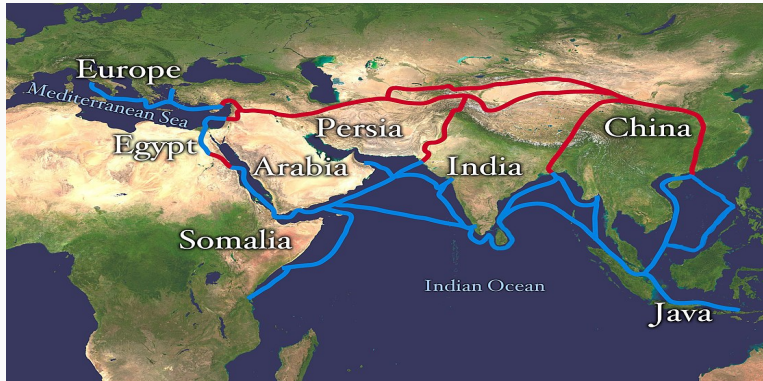
[https://books.google.com/ngrams/graph?content=globalization&year\\_start=1850&year\\_end=2019&corpus=en-2019&smoothing=3](https://books.google.com/ngrams/graph?content=globalization&year_start=1850&year_end=2019&corpus=en-2019&smoothing=3)



# FOUR DISTINCT ERAS OF GLOBALIZATION

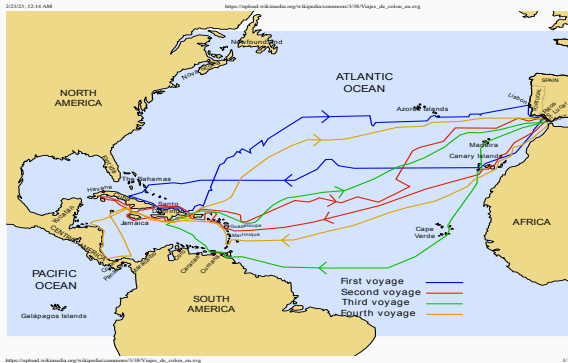
- Incipient globalization: connecting the world
- Globalization 2.0: steam engines and telegraph
- Globalization 3.0: diesel engines, flight and radio
- Globalization 4.0: large diesels, turbines, containers and microchips

# INCIPIENT: GLOBALIZATION'S DISTANT ORIGINS



Extent of the Silk Road and Spice trade routes in 1453

# INCIPIENT: GLOBALIZATION'S DISTANT ORIGINS



## The Voyages of Christopher Columbus (1492–1504)

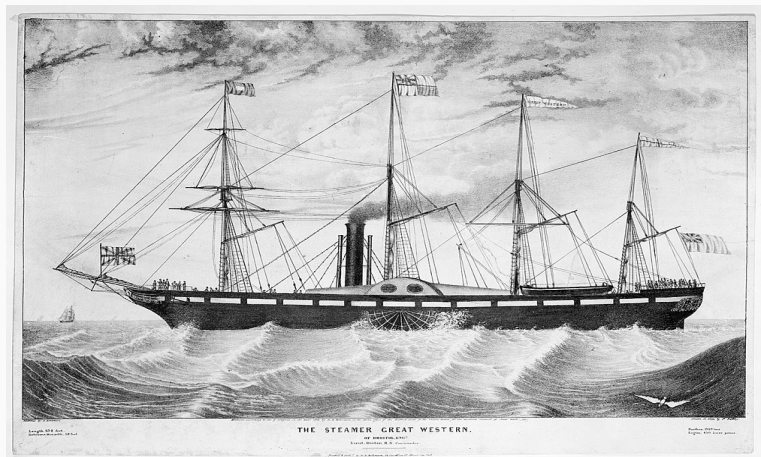


# INCIPIENT: GLOBALIZATION'S DISTANT ORIGINS



By *Magellan\_Elcano\_Circumnavigation* - fr.svg CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=8448739>

# GLOBALIZATION 2.0: STEAM ENGINES AND TELEGRAPH





# GLOBALIZATION 2.0: STEAM ENGINES AND TELEGRAPH

- Telephones (1876)
- Railroads (post-1840)
- Large steam liners (1910)
- Literary sensibility, Joseph Conrad

## GLOBALIZATION 3.0: THE FIRST DIESEL ENGINES, FLIGHT, AND RADIO





## GLOBALIZATION 3.0: THE FIRST DIESEL ENGINES, FLIGHT, AND RADIO



# GLOBALIZATION 3.0: THE FIRST DIESEL ENGINES, FLIGHT, AND RADIO





1950-1973 growing of four materials

- **Steel:** 4 times                   \*\*\*\*
- **Cement:** 6 times               \*\*\*\*\*
- **Ammonia:** 8 times           \*\*\*\*\*
- **Plastic:** 26 times           \*\*\*\*\*

- The advanced diesel engines (1950s size doubled)
- The gas turbine for jetliners (1938, 1944, 1949)
- The containers (1957)
- The leaps in computing and information processing (ENIAC, 1945)

Larger diesel engines (deadweight ton, DWT) after discovery of Middle East oil fields

- **pre-1950:** 16k
- **1956:** 50k
- **1960s:** 180k – 320k
- **1970s:** 500k

- The advanced diesel engines (1950s size doubled)
- The gas turbine for jetliners (1938, 1944, 1949)
- The containers (1957)
- The leaps in computing and information processing (ENIAC, 1945)

- **1938:** first independently emerged in England and Germany
- **1944:** WWII
- **1949:** Comet, British
- **1958:** Boeing

- The advanced diesel engines (1950s size doubled)
- The gas turbine for jetliners (1938, 1944, 1949)
- The containers (1957)
- The leaps in computing and information processing (ENIAC, 1945)

## GLOBALIZATION 4.0: THE LARGE DIESELS, TURBINES, CONTAINERS, AND MICROCHIPS



- The advanced diesel engines (1950s size doubled)
- The gas turbine for jetliners (1938, 1944, 1949)
- The containers (1957)
- The leaps in computing and information processing (ENIAC, 1945)



## GLOBALIZATION 4.0: THE LARGE DIESELS, TURBINES, CONTAINERS, AND MICROCHIPS

