

**2024-01-30 Tu: Spring 2024:
Econ 115 ::**

**III. Modern Economic Growth:
Globalization**

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Last Lecture Lessons:

- 1.

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Last Lecture Lessons:

1. Accelerants of Malthusian population pressure & poverty: patriarchy & domination...
2. Gender imbalance in human “effective population sizes”: what does that tell us?...
3. The demographic world of the 1700s: the case of Abigail Smith Adams...
4. The demographic world of the 1700s: fertility, pregnancies, life expectancy, & population growth rates...
5. Increasing wealth & life expectancy...
6. Life expectancy & the fertility decline (but is it literacy, culture, & c.?)...
7. The magnitude of the population explosion...
8. Magnitude of the population explosion sufficient to offset pre-1870 technological progress...
9. Magnitude of the population explosion insufficient to offset post-1870 technological progress...
10. Toward ZPG & beyond...

2024-01-30 Tu: Spring 2024: Econ 115 :: III. Modern Economic Growth: Globalization

This Lecture:

1. 1870 as the inflection point...
2. Malthusian, still, as of 1870—and 1919 (Keynes)?...
3. Dover-Circle economies...
4. Globalization as a necessary—albeit a secondary—cause: necessary, but only a small part of sufficient...
5. Trade globalization...
6. Investment globalization...
7. Migration globalization...
8. The gold standard...
9. The American century: resource expansion, free labor, American system, Lev Bronstein

READINGS: This Class: DeLong & (Optional) Eichengreen

- **DeLong, J. Bradford.** 2022. *Slouching Towards Utopia: An Economic History of the Twentieth Century*. New York: Basic Books <bit.ly/3pP3Krk> <https://bcourses.berkeley.edu/files/87705514/download?download_frd=1>, ch. 1.
- **Eichengreen, Barry J.** 1998. *Globalizing Capital: A History of the International Monetary System*. Princeton, NJ: Princeton University Press. <https://archive.org/details/globalizingcapit00eich_0>, ch. 2.

DeLong

1. How did the British Industrial Revolution contribute to the onset of globalization in the 19th century?
2. How did the telegraph and other communication advancements influence global economic and political decisions in the years up to 1914?
3. How did the technological advancements during the Industrial Revolution impact global trade and migration patterns?
4. How did the globalization of transport, notably the steamship and railroad, transform global economic dynamics?
5. Analyze the impact of migration patterns between 1870 and 1914 on global economies and societies.
6. Discuss the economic and social consequences of the "first unbundling" as described by Richard Baldwin in the context of late 19th-century globalization.
7. How did the global distribution of labor change shift?
8. How did international trade shape global economic relationships ?
9. Did globalization in the early 20th century lead to economic prosperity but also deepen global income disparities?

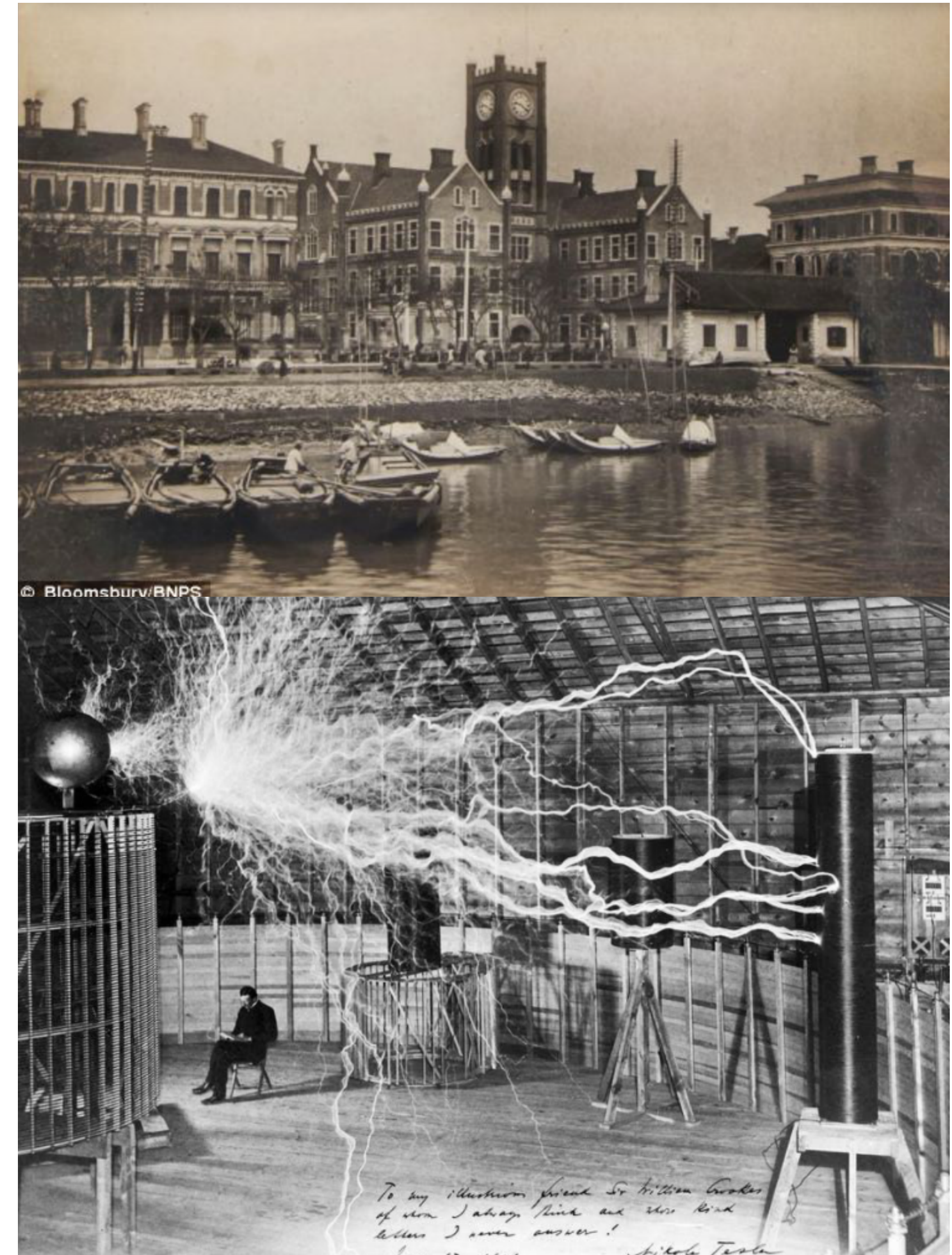
Eichengreen

1. Evaluate the global economic impact of the gold discoveries in California and Australia in the mid-19th century.
2. Discuss the role and evolution of bimetallism in the international monetary system during this period.
3. Examine the factors that led to the widespread adoption of the gold standard by the late 19th century.
4. How did this shift affect international economic relations?
5. Analyze the economic consequences of the Franco-Prussian War (1870-1871) on the international monetary system.
6. Explore the role of international capital flows and foreign investments in shaping the global economic landscape between 1850 and 1914.
7. Assess the impact of major financial crises and panics (e.g., the Panic of 1873) on the international monetary system and global economic stability.
8. Evaluate the role of key economic powers, such as Britain, Germany, and the United States, in shaping the international monetary system during this era.
9. Reflect on the long-term consequences of the international monetary policies and practices established between 1850 and 1914 for global economic history in the 20th century.

The Inflection Point

1870 as inflection point:

- As of 1870, had the Industrial Revolution raised the standard of living or lightened the toil of the working class in England, the country at its center?
- No
- Why not? Malthusian forces—population explosion & thus smaller farm sizes.
- But in the years around 1870, the pace of global growth in ideas nearly quintupled—from 0.44%/year to 2.1%/year
- “Global North” ideas edge since 1870: 2.5% to 2.1%
- “Global North” ideas edge 1770-1870: 0.91% to 0.44%



As of 1870...

...smart money might still bet on Malthus:

- As late as 1919, John Maynard Keynes was not sure the escape from the Malthusian trap was permanent:
- ‘Malthus disclosed a Devil. For half a century all serious economical writings held that Devil in clear prospect. For the next half century [before 1919] he was chained up and out of sight. Now perhaps we have loosed him again...’



What Happens Around & After 1870...

The Dover Circle

Longest-Run Global Economic Growth

| Date | Technological Ideas-Stock Growth Rate h | Technological Ideas Stock Level H (1870 = 1) | Average Annual Real Income per Capita y | Total Human Population P (millions) |
|------|---|--|---|---------------------------------------|
| 800 | 0.014% | 0.297 | \$900 | 240 |
| 1500 | 0.052% | 0.429 | \$900 | 500 |
| 1770 | 0.149% | 0.643 | \$1,100 | 750 |
| 1870 | 0.442% | 1.000 | \$1,300 | 1300 |
| 2010 | 2.159% | 20.557 | \$11,600 | 6900 |

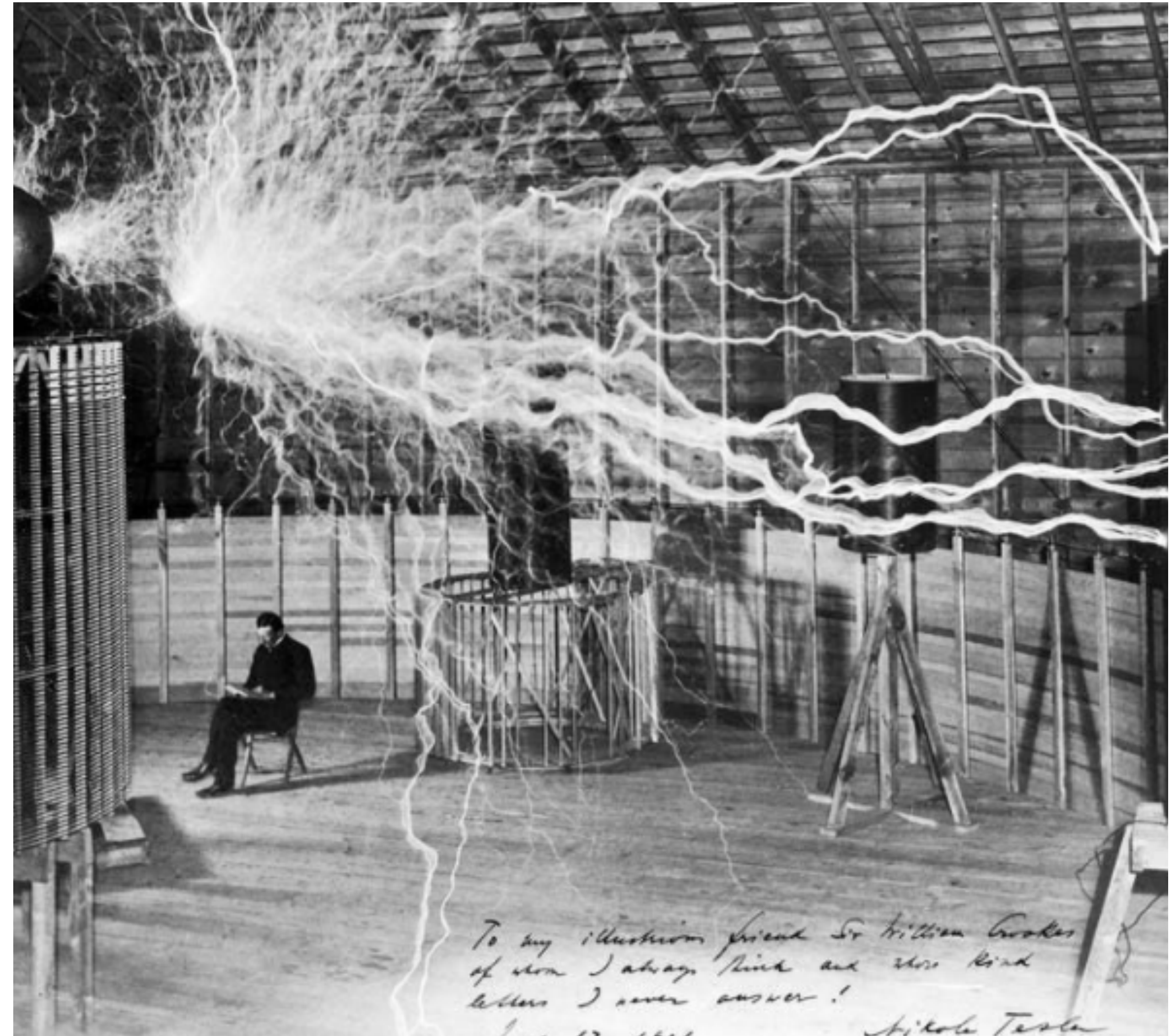
| Date | Ideas-Stock Growth h | ideas Level H | Annual Real Income per Capita y | Population P (millions) | Total Real Income Y (billions) |
|------|------------------------|-----------------|-----------------------------------|---------------------------|----------------------------------|
| 800 | 0.022% | 0.2 | \$900 | 8 | \$7.20 |
| 1500 | 0.096% | 0.5 | \$1,000 | 25 | \$25.00 |
| 1770 | 0.200% | 0.8 | \$1,400 | 75 | \$105.00 |
| 1870 | 0.914% | 2.0 | \$2,800 | 175 | \$490.00 |
| 2010 | 2.514% | 68.0 | \$50,000 | 800 | \$40,000.00 |
| | \$80,040 | | | | |

Globalization

- Before 1870, ideas growth not fast enough to outrun fecundity
- not fast enough to create a society rich enough to trigger the demographic transition
- After 1870, it was...
- Principal causes: the industrial research lab and the modern corporation
- Resting on: **the globalized market economy**, and modern science...

GROWTH OF “TECHNOLOGY”

| Year | World | Global North |
|------|--------|--------------|
| 1500 | 0.052% | 0.1111% |
| 1770 | 0.149% | 0.200% |
| 1870 | 0.442% | 0.914% |
| 2010 | 2.140% | 2.514% |



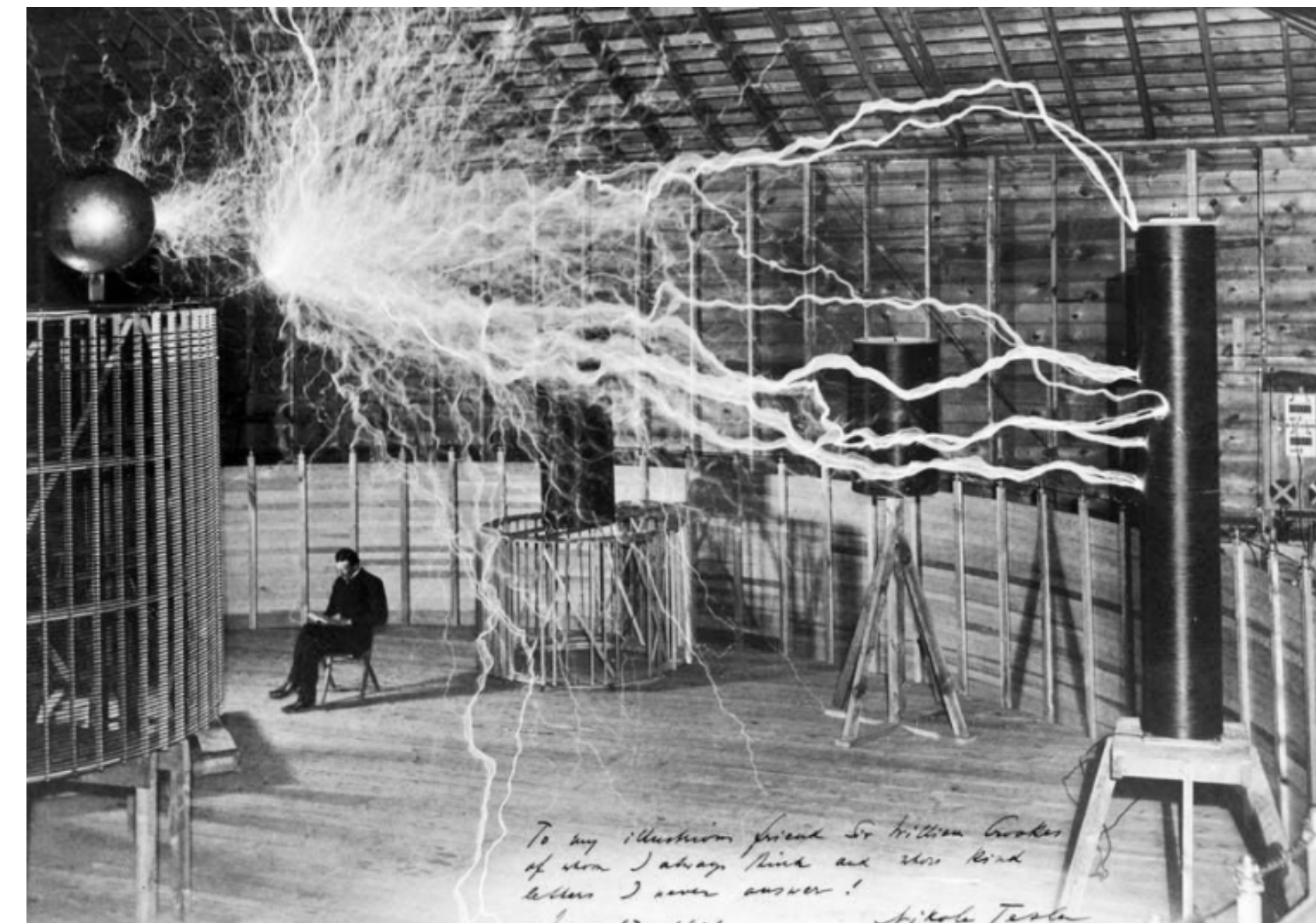
Lecture: Globalization & Growth's Meaning: 1870-1914

1870 as inflection point:

- As of 1870, had the Industrial Revolution raised the standard of living or lightened the toil of the working class in England, the country at its center?
- No
- Why not? Malthusian forces—population explosion & thus smaller farm sizes.
- But in the years around 1870, the pace of global growth in ideas roughly quintupled—from 0.44%/year to 2.06%/year
 - “Global North” ideas edge since 1870: 2.34% to 2.06%
 - “Global North” ideas edge 1770-1870: 0.91% to 0.44%

Causes:

- Principal cause: The modern corporation and its industrial research labs that made routine the process of developing and then implementing new productive ideas
- Secondary cause: globalization
 - Of goods trade using railroads & iron-hull steamships
 - Of investment
 - Of people through migration
 - Of communications via telegraph



Globalization a Secondary Cause

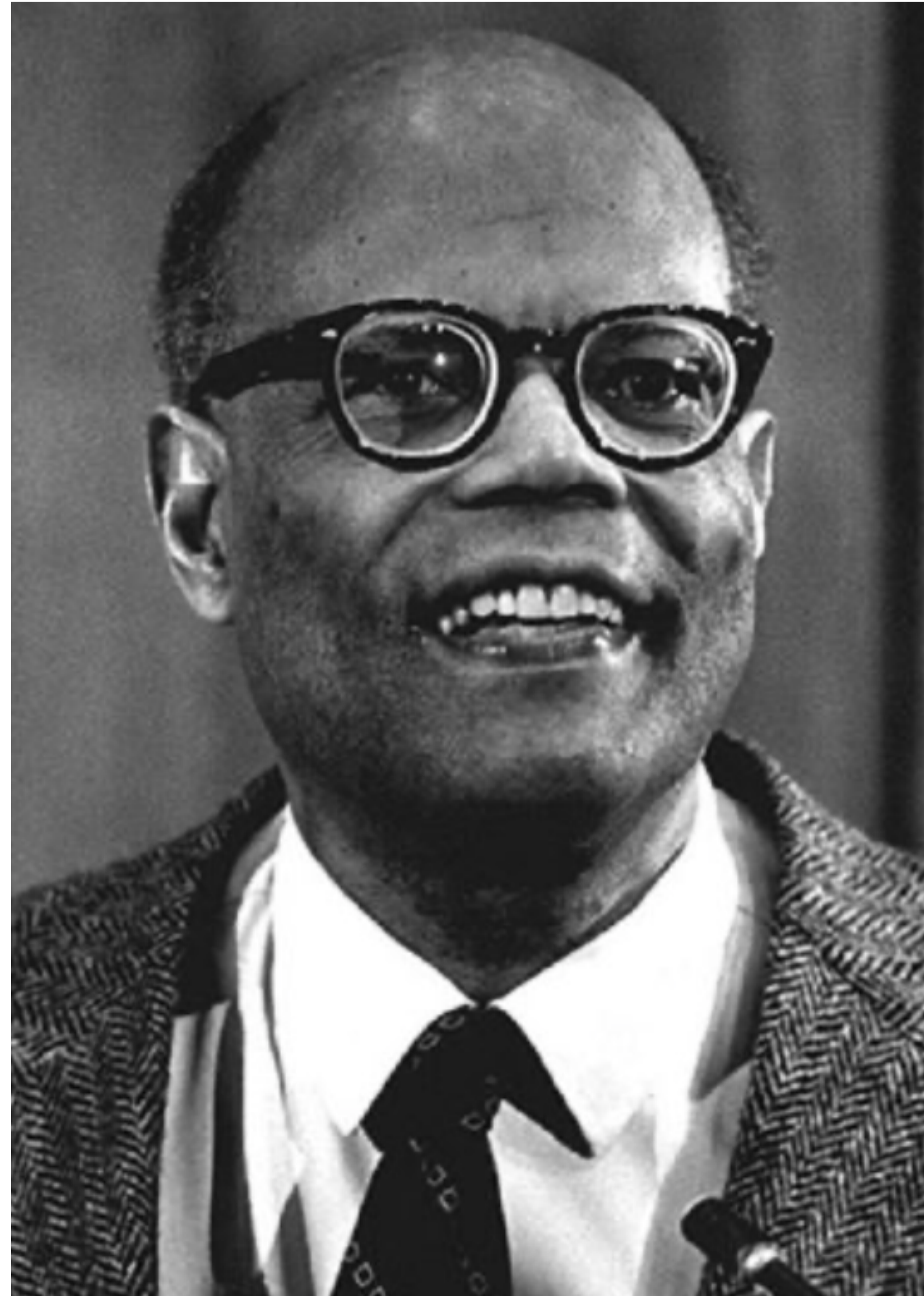
Aspects of globalization:

- Cheap ocean and rail transport that destroyed distance as a cost and brought economies all over the world cheek-by-jowl: this greatly amplified the division of labor, and prosperity depends primarily on a fine division of labor.
- Trade, investment, migration.
- Also: The existence of a market economy: rapid modern economic growth is not inevitable once you have a stable market economy with secure property rights. But it does help.
- And if I were leftier than I were, I would stress: the ability to greatly ramp up the rate of exploitation, and so devote much more of society's production to investment and capital accumulation.

Globalization: Migration

Migration:

- 100 million people left their continents of origin between 1870-1913—70 million of them permanently:
- 9 days from Liverpool to New York: it had taken a month in 1800
- 1.5 month's wages for an unskilled European worker—to double your pay, and your children's pay
- 50 million from Europe, 50 million from Asia
- The development of underdevelopment
 - Asian migrants channeled to “tropical” regions making “tropical” goods
- Exceptional America: “full citizen” populations of British Empire/U.S./Germany



| Year | British Empire: European- descended population | United States ("full citizen") | Germany |
|------|---|-----------------------------------|---------|
| 1800 | 17 | 4 | 15 |
| 1840 | 28 | 13 | 27 |
| 1870 | 37 | 33 | 41 |
| 1913 | 59 | 83 | 67 |
| 1939 | 75 | 113 | 80 |
| 2016 | 138 | 288 | 82 |



1870-1914 Migration Made for a Richer World

The two-thirds who migrated and stayed found their and their children's living standards higher by a factor of between 1.5 and 3...

- The one-third who migrated and then returned back home did so with resources that made them at the worst solid middle classes...
- Wages in Europe rose...
- Workers no longer faced competition from those who had left.
- Resource-rich settlement areas like Canada and Argentina with Europe-like climates provided a further boost to the living standards of those who had been Europeans...

Immigration Restrictions

In the temperate zone economies to which migrants went, the populists won before World War I in one narrow aspect: with respect to making and keeping settler colonies “European”:

- Asian immigrants were largely kept out of what Arthur Lewis calls the “temperate countries of European settlement”...
- The flow of migrants out of China and India was directed elsewhere, to the tea plantations of Ceylon or the rubber plantations of Malaysia...
- There is no sign that workers already on the labor-scarce western, peripheral side of the Atlantic lost out in any sense as a result of the migration wave from labor-abundant Europe...
- Migration did not raise wages much in other migration-source economies...
- China and India were so large relatively in population that emigration was a drop in the bucket...
- Did migration lower relative wages in tropical-zone recipient economies?
- Yes—and it did so in economies that never saw a migrant...

Globalization: Investment

Herbert Hoover. Born in 1874 in Iowa. Father a blacksmith. Orphaned at 10:

- Farmed out to be raised in Oregon by an uncle and aunt
- First student to attend Stanford University (then free)
- Graduating in 1895 in the distressed aftermath of the Panic of 1893
- Became a mining engineer.
- First job was as a mine laborer in Grass Valley, at 600 dollars a year.
 - In today's dollars, \$9/hr—but same relative income as \$80/hour today
 - multiples of x30, x8 for inflation and real income growth
- Next was as an intern and special assistant to mining engineer Louis Janin at 2400 dollars a year.



Herbert Hoover II

Globalization and Imperialism!

- Then in 1897 he crossed the Pacific to first Australia, working first for Bewick, Moreing for 7000 dollars a year
- Then to China, working at 20,000 a year and up:
 - Somehow wound up with Kaiping Coal Mine
 - Told 2 stories:
 - Rescued shareholders from corrupt Chang Yenmao
 - Played it straight with Chang Yenmao, but then was betrayed by Belgian financiers
- 1901-1917 his base was London, as he worked in and managed investments in Australia, China, Russia, Burma, Italy, and Central America in addition to the United States.



Herbert Hoover III

Politics!

- WWI aid to Belgium
- In 1917 he moved back to America.
- Post-war famine relief
- Secretary of Commerce in 1924
- Elected president in 1928.
- From son of the town blacksmith to college graduate to multimillionaire mining consultant to elected President of the United States in 1928...
- Could anyone's ascent have been so fast and so far anywhere else?
- Was anyone else's ascent so far and so fast, even in America?



Globalization: Trade

Prices of flour in Chicago and London:

- In 1840 London 2x
- In 1870 London 1.33x
- In 1910 London 1.1x

Railroads

- 1900: 12,000 miles of railroads in Africa, 38,000 miles in Asia, and 26,000 miles in South America
- 1930: 40,000 miles of railroads in Africa, 80,000 miles in Asia, and 60,000 miles in South America
- Everyplace in the world—as long as there was a dock and a RR linking it—became cheek-by-jowl with everyplace else for all commodities save the fragile and the spoilable

North Atlantic dominance:

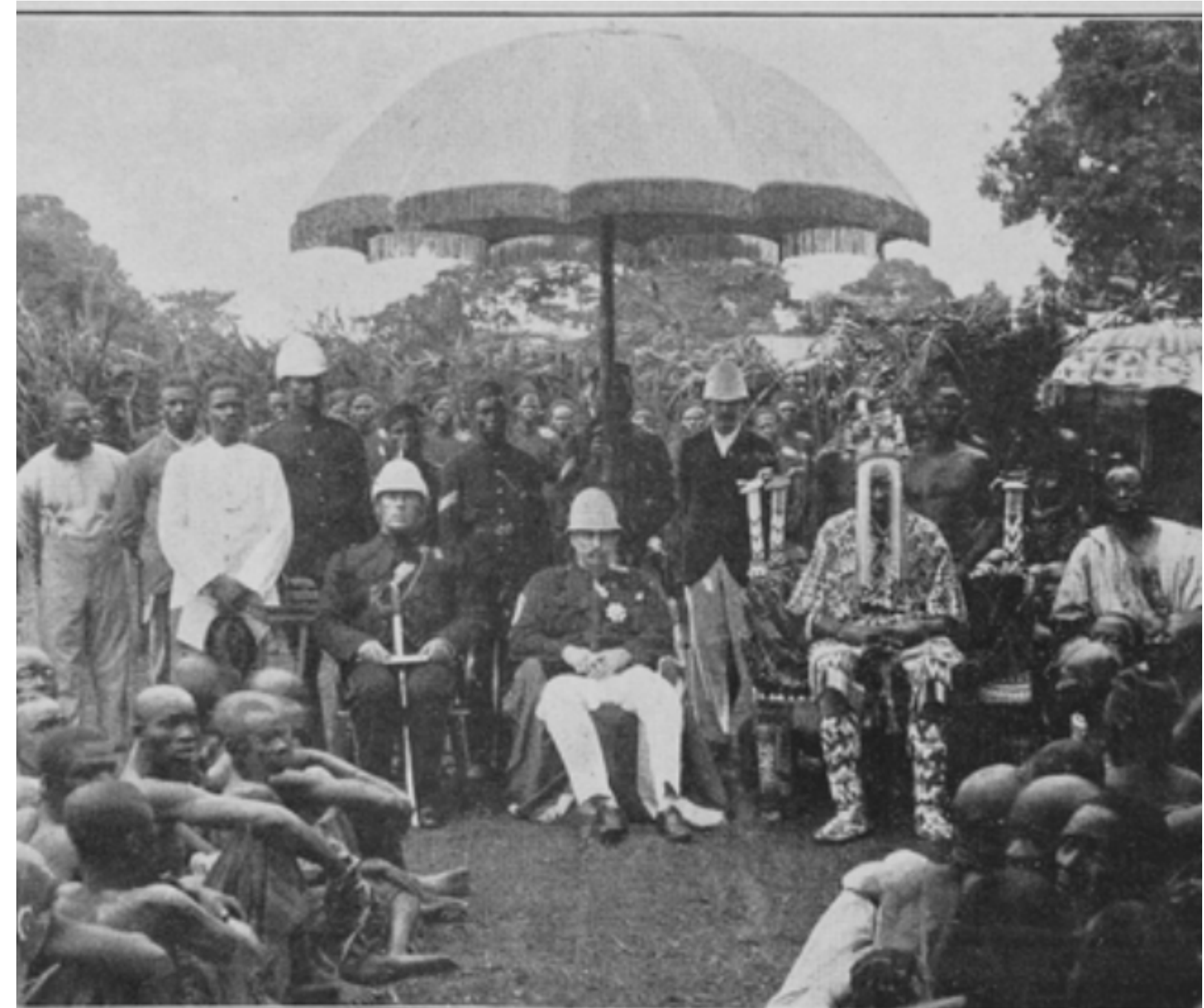
- Its comparative advantage in making manufactured goods became overwhelmingly important
- International trade as a proportion of world production:
 - 1.5% in 1500, 3% in 1700, 4% in 1850,
 - 11% in 1880, 17% in 1913, 30% today

More things to keep in mind:

- Population explosion, global reach of investment, demographic transition, feminist revolution, one world story, world conquest, escalator to modernity

Underdevelopment & Empire

- The standard package for successful development;
 - Market-promoting government;
 - Building railroads, canals and ports;
 - Chartering banks for commerce and investment;
 - Establishing mass education
- Imposing smart tariffs on those manufactured imports that would in the short-run crowd out production and thus the creation of the communities of engineering practice
- Colonial masters would not allow the standard package
- Nevertheless, progress:
 - Even outside of the global north the world was far richer in 1950 than it had been in 1800
 - The center-of-gravity of what now is the global south was at a living standard of \$2 a day in 1800s
 - \$2.25 by 1870
 - \$3.50 by 1913.
 - But still about \$3.50 by 1950.
- However, there were a number of economies that seemed to be taking advantage of opportunities:
 - Japan
 - Those parts of Latin America that escaped internal colonization by landed and bureaucratic elites
- But the gap between global north and global south had grown: from 2.5 to 1 in 1800 to 4 to 1 in 1870 and 1913, and to 7 to 1 by 1950.



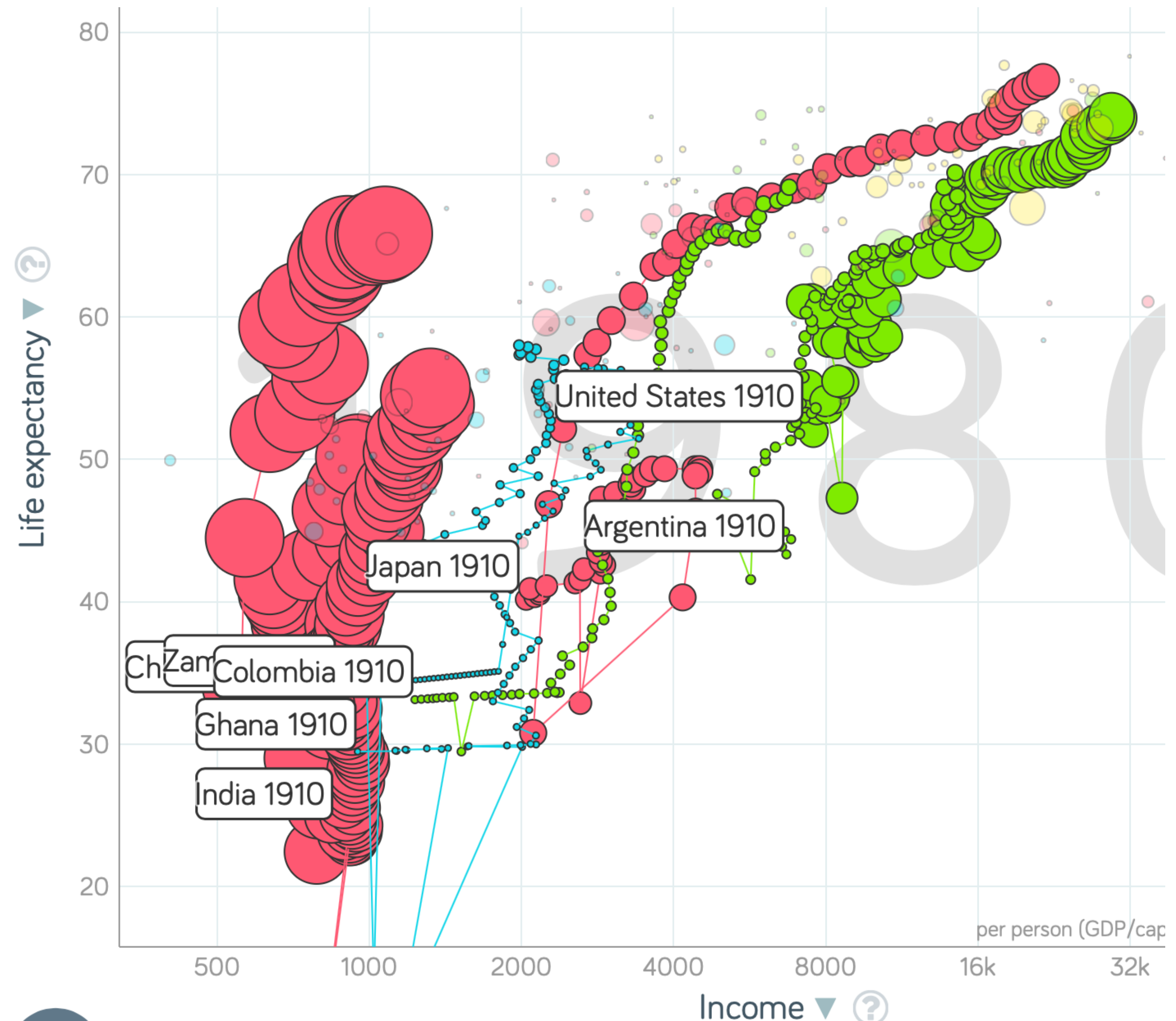
Comparative Development, 1911-1990

Economists expect “convergence”:

- Factor-price equalization
- Non-rivalry of ideas
- Private property & a market economy
- Governance aimed at positive-sum general prosperity
- All these should drive rapid convergence
- It did not happen

In 1990 China & India perhaps 50% richer than 1910—perhaps:

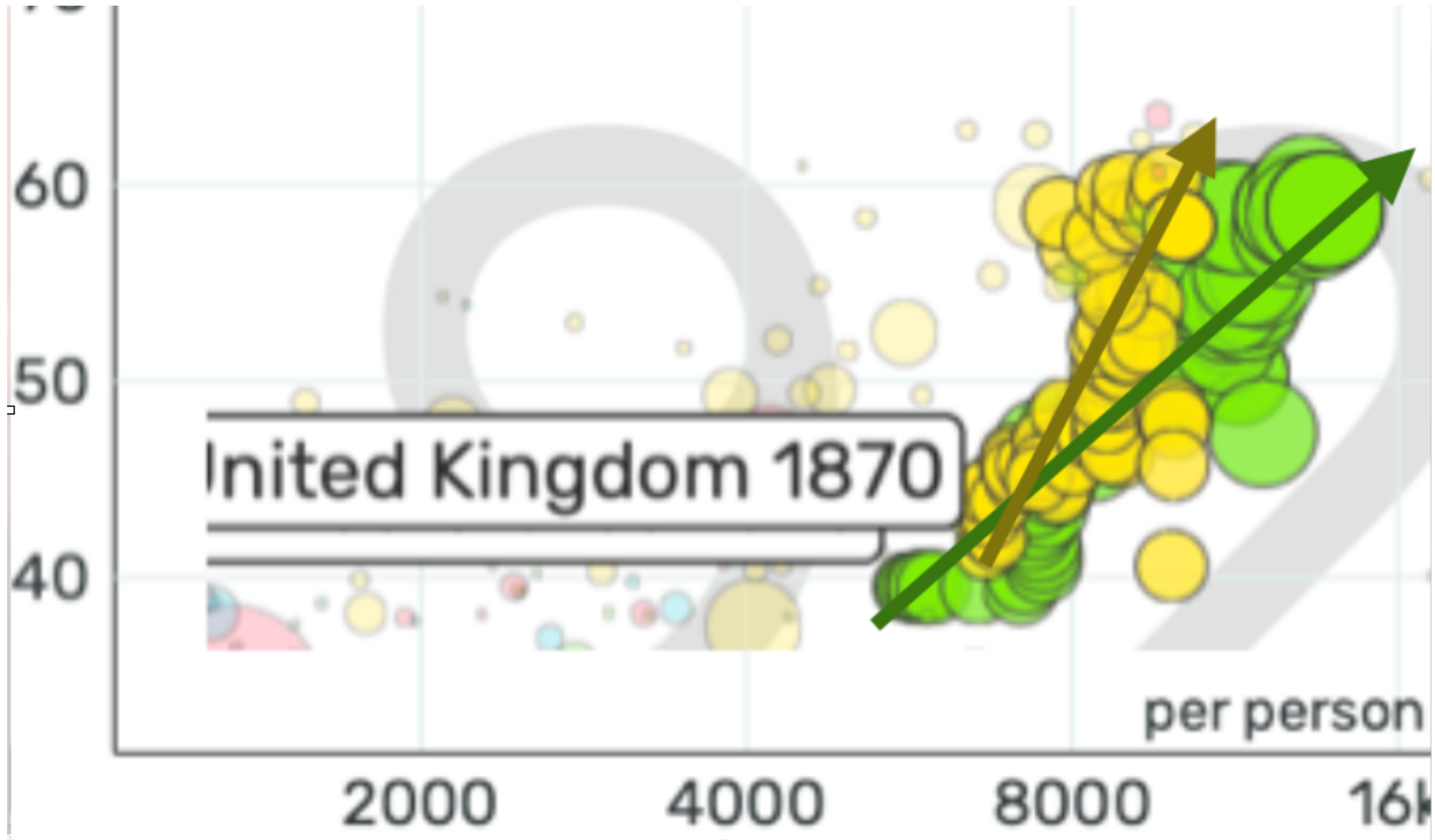
- But much much much much further behind
- Not catching up
- Not fully participating in advance
- India & China in 1990 at best 20% of U.S. in 1910
- And full convergers were rare...
 - Japan, but not even Argentina



Globalization: The Gold Standard

- Jean-Baptiste Say's confidence...
- The problem of coordination on a global scale...
- Whose money is good?...
- A monetary system built on the back of gold reserves...
- Balance-of-payments deficit → gold outflow → domestic deflation...
- Balance-of-payments deficit → interest-rate increases → domestic deflation...
- Balance-of-payments surplus → gold inflow → domestic boom & inflation?...
- Financial crises: going off and resuming the gold standard...
- “When London catches cold, Buenos Aires catches pneumonia”...

The American Century Begins: U.S. vs. U.K. Growth, 1870-1930



American Exceptionalism

The United States in its first century: conquering natural resources:

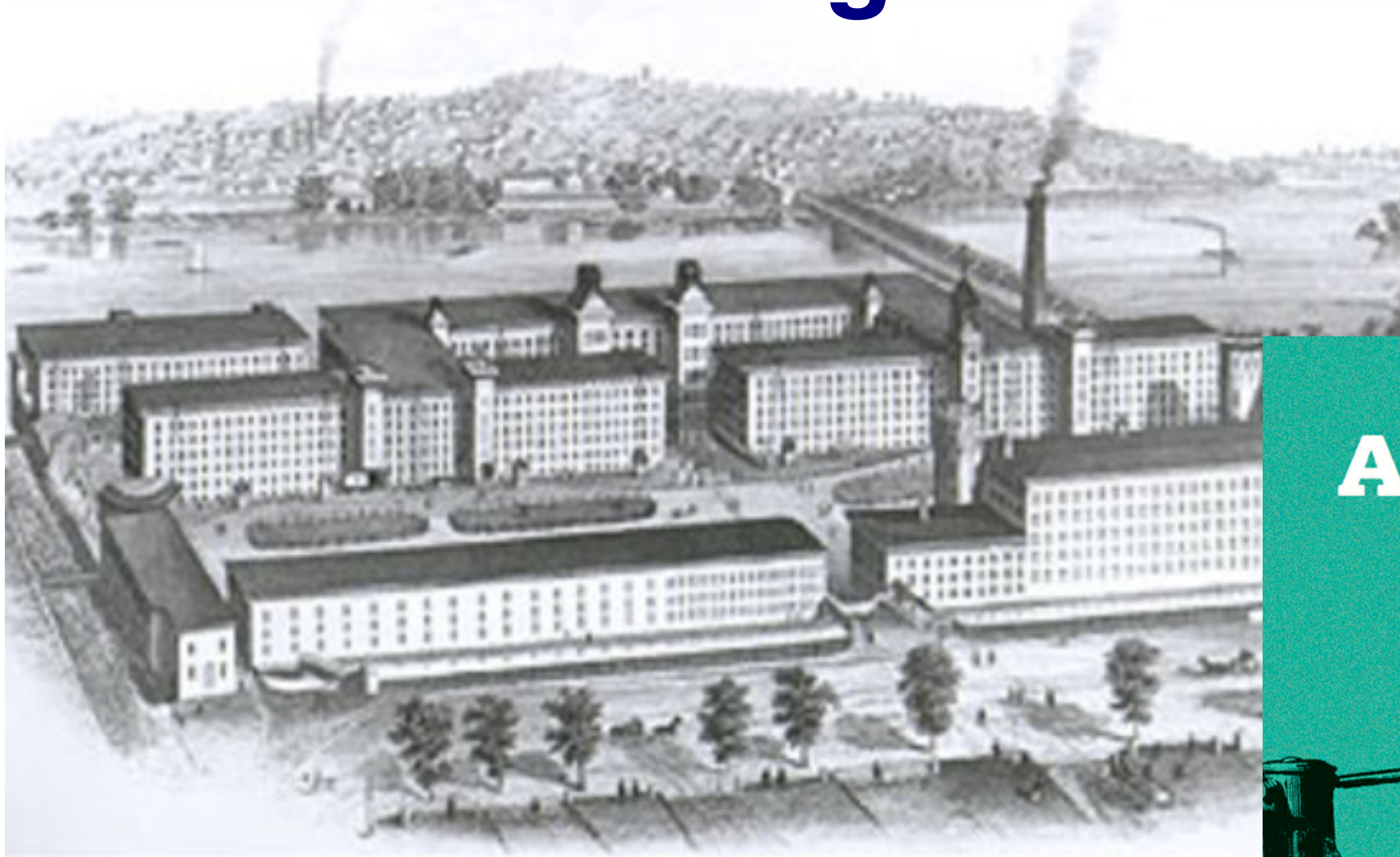
- European settlement of the region that was to become the United States started in earnest around 1650 as three groups—religious fanatics, canny traders, and simple conquistadores—converged on the region
- The American colonists soon found themselves rich by pre-industrial standards—perhaps twice as rich as their predecessors and compatriots back in northwestern Europe
- Between 1790 and 1860 the population of the United States grew from 4 million to 31 million
- Average living standards roughly doubled
- A rate of growth of real production per worker of 1.0% per year from 1790 to 1860
- Accompanied by a rate of population growth of 3.0% per year

What If the U.S.A. Had Been Penned East of the Appalachians?

Britain back then had the fastest labor efficiency growth: perhaps 0.6% per year

- Let's assume it was equal in America.
- Then available natural resources per worker must have been growing at 1.8% per year.
- With a 3% per year population growth rate
- Available natural resources were growing at 5% per year.
- How? Westward expansion
 - Suppose that the U.S. had been penned up behind the Appalachians from independence on
 - As in some counterfactual alternate-history novel in which Britain arms the trans-Appalachian Amerindians with firearms and tactical advisors
 - With a -3.0% per year for the growth rate of resources per capita, American living standards would have fallen at 0.6% per year throughout the first two-thirds of the nineteenth century.
 - That's a lot like the nineteenth-century experience of China (although starting from a higher living-standard base)
 - The history of the United States in the years up to the Civil War is a history of transportation improvements, of westwards settlement, and of conquest, genocide, and Amerindian removal

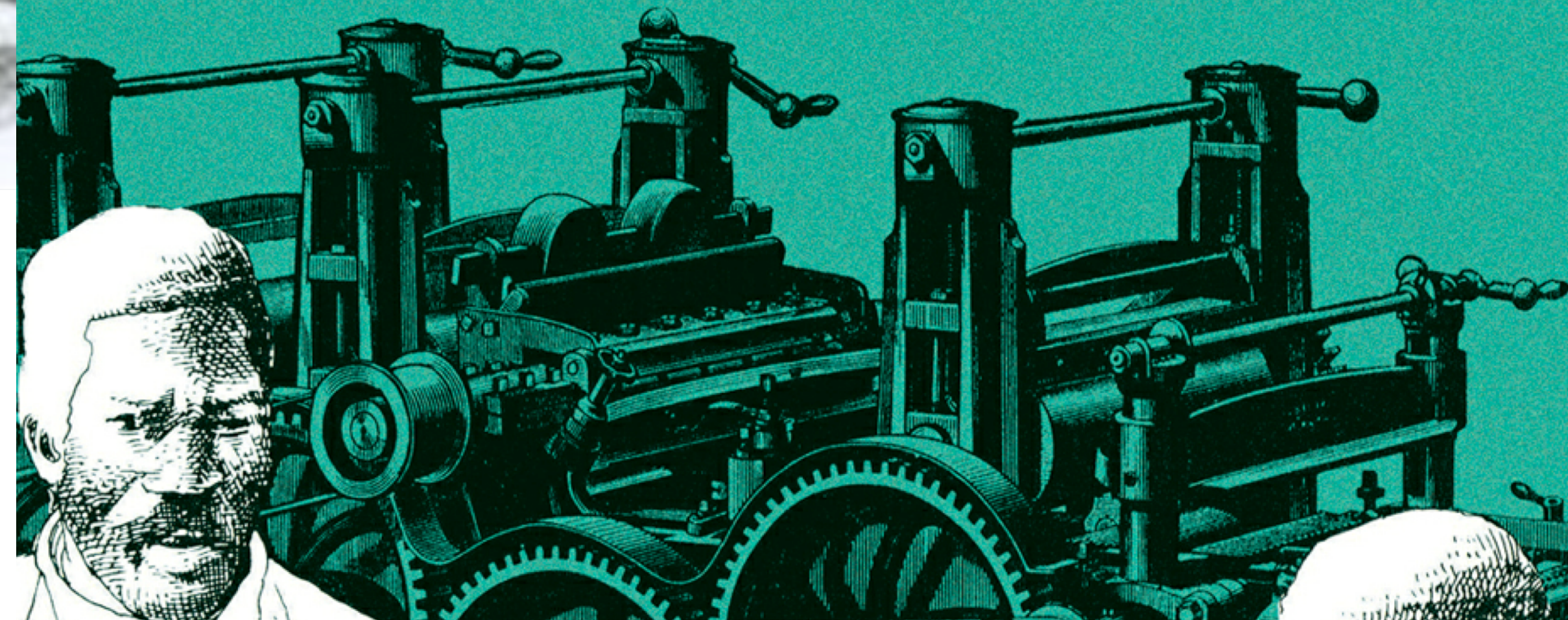
New England vs. The “South”



Fred Bateman & Thomas Weiss

A Deplorable Scarcity

The Failure of Industrialization in the
Slave Economy



What Were the Odds as of 1830 That New York & Washington Would Supplant London? They Seemed Low...

Britain had huge advantages...

- How did it lose them?
- What advantages did America have?

Britain's decline:

- Class "bloody mindedness"?
- Excessive liberalism?

American advantages:

- Resources
- American system → mass production
- Education
- Pragmatic governance



Globalization & Lev Bronstein

Lev Bronstein. Born October 26, 1879, on the farm.

Nearest school 15 miles away

- Sent away to boarding school in nearest large grain port
- Wound up in New York in 1917:
 - “Rented an apartment in a workers’ district, and furnished it on the installment plan. That apartment, at eighteen dollars a month, was equipped with all sorts of conveniences that we Europeans were quite unused to: electric lights, gas cooking-range, bath, telephone, automatic service-elevator, and even a chute for the garbage. These things completely won the boys over to New York. For a time the telephone was their main interest; we had not had this mysterious instrument either in Vienna or Paris...”



Lev Bronstein II

Overwhelmed by the then-prosperity of the United States

- Especially its technological marvels:
 - “The children had new friends. The closest was the chauffeur of Dr. M. The doctor’s wife took my wife and the boys out driving... the chauffeur was a magician, a titan, a superman! With a wave of his hand, he made the machine obey his slightest command. To sit beside him was the supreme delight...”
- But the Russian Revolution broke out. He returned to Russia:
 - “I had had no time to more than catch the general life-rhythm of the monster known as New York...”
 - “I left for Europe with the feeling of a man who has had only a peek into the furnace where the future is being forged...”



Catch Our Breath

Let's reflect on what we have just heard & seen...

1. Comments
2. Questions
3. Readings

