



Lecture Notes: The Development of Underdevelopment

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I. The Watershed: The 1870 Inflection Point

A. Had the Industrial Revolution Lightened the Toil?

As of 1870, had the British 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? Because of Malthusian forces—a population explosion & thus smaller farm sizes would result from any improvement in human technological knowledge about the control of nature and the organization of humans. The smaller farm sizes produced by larger populations would reduce productivity. Thus while human technological knowledge capital-H would increase and could increase significantly,

human labor efficiency capital-E would not. And the pace of technological and organizational change not fast. Not fast enough to raise incomes high enough to force the demographic transition, and break the mold of this Malthusian system.

From this comes the permanent world-historical importance of 1870: Around the year 1870—in the generation between 1860 and 1880—our worldwide lower case-h proportional rate of growth in the value of the stock of useful human technological knowledge about the control of nature and the organization of humans goes from 0.44%/yr to 2.06%/year. And there it sticks—until, possibly, this rate of growth drops off, starting now. (But that is the subject for another time.)

B. Causes of the Circa-1870 Speed-Up

The principal cause of this speed-up? The coming of the modern industrial research lab and the growth of the STEM labor force that made the process of creating, developing, and then providing proof-of-concept of new productive technological ideas a routine and routinized and rationalized one. Plus the coming of the modern corporation that made the process of deploying new technological ideas on a global scale a routine and routinized and rationalized one.

Was the growth of the STEM labor force, the development of the industrial research lab, and the coming of the modern corporation inevitable—baked in the cake—as a result of what went down during the 1770-1870 British Industrial Revolution era? Or might the path to this circa-1870 economic-engineering-technological breakthrough have been missed? This is a deep question that we do not have good answers to. I tend to say that it was not baked in the cake, at least not by anything that happened in the first two-thirds 1770-1840 of the British Industrial Revolution century. Why do I think this? Because arguments that it was

baked in the cake tend, I think, to lead us to have expected another couple or more of speed-ups in lower case-h since. And we have not had such.

C. Globalization and Divergence

But assisting the STEM-lab-corporation trio in discontinuously and substantially boosting lower case-h was globalization:

- Globalization of goods through trade ,using railroads and iron-hulled steamships
- Globalization of people through migration, using railroads and iron-hulled steamships
- Globalization of communications, using the telegraph

Yet, somehow, at least the first century of the post-1870 Modern Economic Growth era has also seen DIVERGENCE, BIGTIME. While economic and political-economic processes have seen the global north develop massively, they have also seen the emergence of enormous income and productivity gaps between the global north and the global south. While the global north has been developed, the global south has been underdeveloped—has grasp of a lot smaller a fraction of the human technological cornucopia H than it had hold of in 1870, or, indeed, at any time earlier.

II. The 1870-1914 El Dorado

A. Growth and Modernization

The jump in lower case-h from 0.44%/year to 2.06%/year around 1870 meant that the next half-century—the years before World War I began in 1914—were, as John Maynard Keynes, looking back from 1919, called it

in his *The Economic Consequences of the Peace*, an economic El Dorado: a previously unseen and unimagined epoch of expansion in global wealth and prosperity, visible nearly everywhere all over the globe.

And as a result, in same ways that world economy as it stood in 1914 on the eve of World War I was remarkably modern. This was true in heavy industries, especially. In 1913 Britain burned 194 million tons of coal. Total coal-equivalent energy consumption of Britain less is less than three times as large. Average U.S. passenger railroad mileage in 1913 was 350 miles/person. The average American thus spent ten hours on a train getting someplace at a distance and at a speed beyond the wildest imaginings of previous centuries, save for miracle tales like the one in which an angel carries the Prophet Habbukuk by the hair from Jerusalem to Babylon to feed the Prophet Daniel a bowl of stew he had just cooked. Today average U.S. airline miles per year are 3000/person. Today we travel ten times as fast and ten times as far on average, but the quantum gap is between 1800 and 1914, not between 1914 and today.

B. Yet an Economy in Many Ways Premodern

In other ways, however, even the global north was desperately poor and premodern, even in the most advanced parts. Agriculture, even in North America, was still largely unmechanized: more than half of Americans still working on the farm. Only Britain and Belgium had less than half of the labor force in agriculture, and that was not because their food was grown via mechanized agriculture, but because their manufacturing exports allowed them to have the farmers who grew by hand the crops that fed them be located in other parts of the world with more abundant and better land.

Remember, in the years before World War I, nitrogen artificial fertilizers were just coming on line. People still worked like dogs in the South Pacific to mine the products of avian defecation off of islands offshore of

Chile and Peru—and then ship the guano back to Europe as fertilizer. “Guano King” was an occupation and description of more than one plutocrat in those days.

C. The Serpent in Garden: Landed Aristocracy

And 1914 still saw, throughout all of the globe save the recent-European-settlement English-speaking lands of Australia, New Zealand, Canada, and the United States, the remarkably thorough political dominance of landlord-aristocrats:

- people who feared being creatively destroyed by economic, political, and sociological change;
- people who had lost or who were rapidly losing any claim to performing a valuable social role;
- people who were then remarkably eager to stoke the flames of nationalism and roll the dice of war, in order to “busy giddy minds with foreign quarrels” and so distract the thoughts of those they wanted to have remain their underlings from ideas like “socialism”, “progressive taxation”, and “expanded government provision of commodities”.

III. 1870-1914 Migration

A. Migration from Europe and Asia

One of the key factors that made the twentieth century what it was was the course that migration took over 1870-1914.

During the half-century before World War I, 100 million people left their continents of origin—70 million of them permanently.

They did so because of the iron-hulled screw-propellered ocean-going steamship. After 1870 it took 9 days from Liverpool to New York: it had

taken a month in 1800. After 1870 a steerage-class ticket for such a transatlantic voyage cost only 1.5 of a month's wages for an unskilled European worker. Pay 1.5 of a month's wages—or have a relative already in the New World pay 3/4 of a month's of their wages—for the journey, and you double your pay, and your children's pay.

Wages were lower in China and India, and so costs were proportionately higher. But the wage gaps were as large: Chinese for San Francisco is still “Gold Mountain”.

And so 50 million from Europe and 50 million from Asia changed continents.

This was an absolute bonanza for those who made the voyage. This was a relief for those back at home who found resources less crowded and scarce.

But this was also a principal source of global inequality—a reason why the global south found itself as a whole leveled down to the Chinese and Indian standard, for China and India were then in the down, poverty-stricken phase of the Malthusian cycle. The development of underdevelopment in the global south can be understood only as a consequence of these waves of migration.

B. Migration and Exceptional America

And this great migration wave was a big reason that the United States of America became truly exceptional throughout the twentieth century. Only America's welcoming of migration—and Germany's lack of the land and thus the living standards to absorb migrants from eastern and southern Europe, and the British Empire's lack of the will and desire to absorb eastern and southern European migrants—gave America the demographic heft it needed for it to become the world's dominant 20th century

hyperpower as it became the one to fill the niche of Saxon-descended superpower.

Back in the days of the decline of the Roman Empire there was a tribe called the “Saxons”. Some of them crossed the North Sea to Britain. Others stayed in Germany. In England today there are three counties named after the Saxons—Essex, Sussex, and Middlesex—plus there is an Earl of Wessex; in Germany there are Niedersachsen, Sachsen, and Sachsen-Anhalt. In the United States there are five Essex, four Middlesex, and three Sussex counties; and I have not looked in Canada, Australia, or New Zealand. That makes eighteen counties plus an earldom named for the original tribe in the lands of the Anglo-Saxon and the Saxon-Saxons.

Of these peoples’ three countries back in 1800, the British Empire had 17 million European descended subjects—plus Indians, descendants of Africans, and others whom the Empire was not interested in educating and so would not make a source of strength rather than a subjugated people whom it cost resources to hold down so they could be exploited. The kingdoms in the lands that would become modern Germany had 15 million. The United States had 4 million—plus 1.5 million African-Americans and 500,000 Amerindians whom, like the British Empire, they were not interested in educating and so would not make a source of strength rather than a subjugated people whom it cost resources to hold down so they could be exploited. Back in 1800, in the race for what nation would become the Saxon-descended 20th century superpower, Britain was ahead of Germany not so much by virtue of its population but of its industry, while the U.S. was far behind.

By 1840 the Saxon language group-speaking populations were 28 million in the British Empire, 27 million in the German states, and 13 million in America—the edge still to Britain, again by its level of industrialization, although the U.S. was catching up fast.

By 1870 the full-citizen populations were: the about-to-be-formed German Empire with 41, the British Empire with 37, and America with 33 million, with the U.S. catching up fast because of both natural increase and waves of immigration from the British Empire in the wake of the Irish potato famine and from Germany as well. By 1913 America had a small edge in industrialization over both Britain and Germany, which were about equal; and America had taken the full-citizen population edge: 83 full-citizens as opposed to 67 in Germany and 59 million in Britain—a 25% edge to America. By 1939 America would have a 42% larger full-citizen population than Germany, and a 50% population edge over the British Empire.

Without the U.S.'s welcoming to eastern and southern European migrants, that would not have happened. And the 20th century would then have been much less of an American century.

C. Restrictions on Migration from Asia

What role did migration—and the rest of globalization—play in the development of underdevelopment in the global south?

50 million left from China and India to places from South Asia and Africa to the Caribbean and the highlands of Peru. Peru in the late twentieth century could have a President surnamed Fujimori. The author V.S. Naipaul was born not in India but in the Caribbean. The redwood forests of northern California contain shrines to the bodhisatva Guan-Yin. Never before or since have we seen such a rapid proportional redistribution of humanity around the globe.

The redwood forests of northern California contain shrines to the bodhisatva Guan-Yin—although migration from China to European-settled California and to the rest of temperate-climate settler colonies and ex-colonies was quickly shut down. Plutocrats like Leland Stanford (the

railroad baron and governor of California who founded and endowed Stanford University in memory of his son) favored immigration; the populists favored exclusion—and “Chinaman go home.”

In the temperate zone economies to which migrants from Europe went, the populists won out 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 United States, Canada, Argentina, Chile, Uruguay, Australia, and New Zealand.

The flow of migrants out of China and India was directed elsewhere, to the tea plantations of Ceylon or the rubber plantations of Malaysia.

D. Consequences of Migration from Asia

Migration out did not raise wages much in the migration-source economies of China and India. They 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. Moreover, migration from China and India lowered relative wages in tropical-zone economies that never saw a migrant. British capital, Brazilian-stock rubber plants, and labor imported from China to Malaya could and did put heavy downward pressure on the wages in Brazil of people who did not know there was such a place as Malaya.

E. The Role of the British Empire

Worth noting in all this is the role of the British Empire. The comparative advantages of the regions that were to become the periphery of the late nineteenth century global economy were not so much given as made. Where the British went they built a fort, some docks, and a botanical

garden—the botanical garden to discover what valuable plants grown elsewhere might flourish here as well. During the nineteenth century the rubber plant came to Malaysia, the tea shrub came to Ceylon, and the coffee bush came to Brazil. Rubber was not introduced into Malaysia, Indonesia, and Indochina until the last quarter of the nineteenth century. But by the end of World War I these three regions had become the principal sources of the world's natural rubber supply.

F. The Malthusian Hammer

India and China, through ill-luck and bad government, had not escaped the Malthusian regime. Technology had advanced: the population of China in the late nineteenth century was some three times what it had been at the start of the second millennium, and living standards were no (or not much) lower. But improvements in productive potential had been absorbed in rising populations, and not in rising living standards. So potential migrants from China and India were willing to move for what seemed to Europeans and others around the globe to be starvation wages.

IV. The Development of Underdevelopment

A. Wages in the Global South

Thus the large populations and low levels of material wealth and agricultural productivity in China and India checked the growth of wages in any of the areas—Malaysia, Indonesia, the Caribbean, or east Africa—open to the Asian migration stream. Workers could be cheaply imported and employed at wages not that far above the physical subsistence level. These workers would be very happy with their jobs: their opportunities and living standards in Malaysian or African plantations would be significantly above what they could expect if they returned to India or China. Low wage costs meant that commodities produced in countries open to Asian immigration were relatively cheap. And competition from

the Malaysian rubber plantations checked growth and even pushed down wages of the Brazilian rubber tappers as well. The late nineteenth century saw living standards and wage rates become and remain relatively low (although higher than in China and India) throughout the regions that were to come to be called the third world.

B. De- and Non-Industrialization in the Global South

And as wages in economies that were to become the global periphery were checked, the prospects for having a rich-enough middle class to provide demand for a strong domestic industrial sector ebbed rapidly.

As a result, the chain of causation went thus:

- The openness of some places for tropical goods could be produced push down their prices in world markets.
- Low prices in the world markets meant low wages everywhere tropical goods were produced.
- Low wages meant no prosperous middle-class anywhere tropical goods were produced.
- No prosperous middle-class meant no mass domestic demand for manufactures.
- No domestic demand for manufactures meant no chance of starting industrialization.
- No chance of starting industrialization meant no building a community of engineering practice.
- No community of engineering practice meant no taking the next step and advancing in industrialization.
- No advancing in industrialization meant no walking onto the escalator to modernity and prosperity.

That, in a nutshell, is the story of the relative underdevelopment of the global south. It was not that globalization left the global south alone in the

years before World War I. It was that globalization put it on a road that made its industrialization more difficult, even though the openness of world markets made it more prosperous in that pre-World war I half century seen rightly as a global El Dorado.

Notes, etc.

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