

# **Slouching Towards Utopia? An Economic History of the Long Twentieth Century**

## **III. Making the First Global Economy 1870-1914**

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### **3.0: 1870 as the Inflection Point**

As of 1870 the smart money was still placed on the bet that the British Industrial Revolution would not mark a permanent divergence of human destiny from its agricultural-age pattern. All agreed that the Industrial Revolution had produced marvels of science and technology. All agreed that it allowed the world to support a much greater population than had previously been deemed possible. All agreed that it gave the world's rich capabilities that, along many dimensions, fell little short of those previously attributed to gods. All agreed that it had greatly multiplied the numbers of the comfortable—that there were now many more people who did not feel the immediate bite of insufficient food, insufficient clothing, and insufficient shelter.

But had the Industrial Revolution lightened the toil of the overwhelming majority of humanity—even in Britain, the country at the leading edge? No. Had it materially raised the living standards of the overwhelming majority—even in Britain? Doubtful.<sup>1</sup> Worldwide, the First Industrial Revolution was a big deal compared to what had come before 1800. Steam power and iron-making and spinning jennies and power looms and telegraph wires had made fortunes for a relatively few by 1870. But the century and a half from Newcomen and the century from Arkwright to 1870 had not transformed human life.

Would it do either of these in the future of 1870? You had to be somewhat utopian back then to be confident that it would be so.

But that changed. Each year after 1870 John Stuart Mill's belief that the progress of science and technology, of industry and enterprise had not lightened the day's toil of any human being or effected great changes in human destiny<sup>2</sup> became less and less credible and less and less true, and by the time World War I began in 1914 had become more-or-less completely false.

For, in comparative perspective with respect to all previous ages, 1870-1914 was indeed, as John Maynard Keynes wrote looking back at it from his World War I-era viewpoint: "economic Eldorado... economic Utopia... the earlier economist would have deemed it... an unprecedented situation... an extraordinary episode in the economic progress of [hu]man[ity]". Human numbers increased, and increased more rapidly than ever before, from about 1.3 billion in 1870 to 1.75 billion in 1914, and yet food became cheaper and easier and not harder and more expensive to secure. In terms of the "bare-bones subsistence basket"<sup>3</sup>, real wages of unskilled workers by the eve of World War I look like they stood more than 50% above their levels of 1870 or so<sup>4</sup>—a world-wide reduction in potential Malthusian pressures never before seen.

How did the world accomplish its further threefold leap, relative to what had taken place in the British Industrial Revolution era of 1800-1870, in the underlying fundamentals of economic growth? And how did what was originally a geographically-concentrated surge become global, albeit unevenly global? Why, instead of the British Industrial Revolution growth surge petering out and being followed by a return to the Commercial Revolution era—itself a positive historical anomaly—did the rate of human progress leap ahead at a tenfold pace? Why does one year since 1870 see the relative technological and organizational progress of three years over 1800-1870, of ten years over 1500-1800, and of a hundred years over 1-1500? Just what happened around 1870 to make this shift? And what has happened between then and today to sustain it?

1870, you see, marked an inflection point in four important factors of material life: transportation (with implications not just for goods traffic but for human migration as well; communication (with implications for finance and organization); openness (of societies and polities to financial, trade, and migration flows); and invention (with its implications for innovation and productivity growth):

1. Globalization in goods transport, in the form of the iron-hulled screw-

propellered ocean-going steamship linked to the railroad network, and subsequent developments.

2. Globalization in communication, in the form of the global submarine telegraph network linked to landlines, and subsequent developments.
3. The openness of the world—most important, perhaps, the open borders<sup>5</sup> in migration, as one in fourteen humans changed their continent between 1870-1914. But also and closely linked to the other forms of openness that allowed transport and communications to produce globalization; that allowed research and development to diffuse throughout the world, albeit slowly; and that made the Long 20th Century the American Century.
4. The development of the industrial research laboratory of Thomas Edison and Nikola Tesla, and its subsequent bureaucratization and generalization

These all four together were, I think, more likely than not enough to be a tipping point. I wish that I could do more in this book to explain why they together were a tipping point, but I do not know enough to do so. I can, however, trace their consequences.

The world of 1870 was still much larger in terms of communication and transportation than our world is. It takes more time to cover space when your speed is low, and the century and a half from Newcomen and the century from Arkwright to 1870 was not enough for steam and iron and mechanical spinning to spread across the globe—but the world of 1870 was shrinking rapidly. The first two factors—globalization in transport and communications—created the possibility of making the world economy, for the first time, a single system: the earnings of a rubber tapper in Brazil would be powerfully influenced by things happening continents away—by the economic growth and demand for rubber in North America and in western Europe and by the success of the British imperial project in Malaya and the “success” of the Belgian imperial project in the Congo, to name four. The iron-hulled steamship, the submarine telegraph cable, and the gunboat were rapidly creating a much smaller world which transport, communication, and imperial rule could cover quickly indeed.

The third factor realized the possibility of an integrated world economic system. Moreover, it transformed the U.S. from likely fifth fiddle to lead violin among the Long 20th Century’s global powers.

This chapter will focus on this “globalization”.

The fourth factor greatly increased the pace of technological growth as inventors

and innovators were no longer forced to be both lone wolves and to also be promoters, projectors, financiers, and managers. individual inventions had been invented, but that invention as a process had not yet been invented—or perhaps it is better to say that it had not yet been routinized, bureaucratized, and systematized. You had the Newcomens in steam and the Arkwrights in textiles and the Wedgwoods in pottery and the Stephensons in railroads and the Isambard Kingdom Brunels in ironwrought infrastructure who were inventor-entrepreneurs in one narrow line of business and technology. Before 1870 you did not yet have the dogged Thomas Alva Edisons and their industrial research labs, or the mad visionary Nikola Teslas who then required massive backup to finish working out the bugs and deploy their brilliant strokes of genius, to create the business of invention and innovation as businesses in their own right. We postpone Thomas and Nikola, their industrial research labs, and the consequences to the next chapter.

### **3.1: Globalization in Trade and Migration as a Key**

What made the surge in real wages over 1870-1914 world-wide rather than confined to the world's industrializing core? That the surge was world-wide rather than confined to where industrial civilization had already taken root was due to the globalization of the economy of the railroad, the wharf and crane, the iron-hulled screw-propellered, ocean-going steamship, and openness to trade, finance, and migration—save that the pampas and the prairies and the other temperate climates were largely reserved for those of recent European descent.<sup>6</sup>

The bringing new products—oil palms and nuts to west Africa, rubber to Malaysia, coffee to Brazil and central America, wheat and sheep to Australia, and many many more—and extracting resources from all around the globe was fueled by 100 million people leaving their continent of origin to live and work elsewhere: 50 million from China and India to places from South Asia and Africa to the Caribbean and the highlands of Peru; 50 million from Europe mainly to the Americas and Australasia but also to South Africa, the highland of Kenya, the black-earth western regions of the Pontic-Caspian steppe, and elsewhere.

These migrants and their descendants made a lot of our history:

- One of these migrants—one whose move preceded the great 1870-1914 wave as migration became really cheap—was Andrew Carnegie (1835-1919), immigrated to America from Scotland in 1848. He was perhaps the champion of upward

mobility: his father was a subsistence-level handloom weaver, and he became the world's premier steelmaster and perhaps the second richest person in the world. We will see a lot of Andrew Carnegie later on in this book.

- Another migrant was Mohandas Gandhi (1869-1948), who migrated from India to Britain to study at the Inner Temple from 1888-1891 and then to South Africa in 1893, where he stayed for 21 years. Only then did he return to lead the movement to win independence from the British Empire for India. The claim is that he sailed to South Africa thinking of himself as a British Empire citizen first and an Indian second, and returned convinced that the British Empire *must* end and willing to do something about it.<sup>7</sup> We will see a lot of Mohandas Gandhi later on in this book.
- A third was David Leontyevich Bronstein (1847–1922), who with his wife Anna Lvovna Zhivotovskaya (1850-1910) crossed the the greatest river he had ever seen and moved 200 miles out of the forest and into the grasslands—which had been horse-nomad lands within historical memory—to pioneer one of the richest agriculture soils in the world: it was fifteen miles from his farm in Yanovka to the nearest post office. We will see a lot of David and Anna's fifth child, Lev Davidovich Bronstein (1879-1940), later on in this book.
- A fourth was Jennie Jerome (1854-1921), who made a reverse migration: from Brooklyn, New York, United States to Westminster, England to marry Lord Randolph Spencer Churchill, becoming engaged in 1873 three days after their first meeting at a sailing regatta on the Isle of Wight. Their marriage was then delayed for seven months while her father Leonard the financier and speculator and his father John Winston the seventh Duke of Marlborough argued over how much money she would bring to the marriage, and how it would be safeguarded. We will see a lot of her son, Winston Leonard Spencer Churchill (1874-1965), born eight months after their marriage later on in this book.
- A fifth was Nikola Tesla (1856-1943), who left Croatia and his wished-for parental destiny as a Serbian Orthodox priest to Graz, Austria, Budapest, Paris, and then New York to become the most brilliant electrical engineer ever. We will see a lot of him later on in this book.
- And a sixth was Herbert Hoover (1874-1967). Born in 1874 in Iowa, orphaned at 10, in 1885 he started moving west—first to Oregon to live with an uncle; second to California as the first student to attend Stanford University where he became a mining engineer, graduating in 1895 in the distressed aftermath of the Panic of

1893; and then in 1897 he crossed the Pacific to first Australia and then China to make his fortune. From 1901 to 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. In 1917 he moved back to America. We will see a lot of him later on in this book.

The industrialization of western Europe and of the east and midwest of North America provided enough workmen to make the industrial products to satisfy global demands, and also to build the railways, ships, ports, cranes, telegraph lines, and other pieces of transport and communications infrastructure to make the first global economy a reality. The 1870-1914 world economy was a high—in historical comparative perspective—investment economy.<sup>8</sup> Today there are 1 million miles of railroad in the world. There were 20 thousand miles of railways in the world when the U.S. Civil War ended in 1865. There were 300 thousand miles in 1914. (There are a million miles today.) In 1850 about 4% of all goods and services produced and marketed crossed national borders; in 1880 it was 11%; and by 1913 17%. (Today it is 30%.)<sup>9</sup>

The upshot was indeed that for the world's middle and upper classes, by 1914 "life offered, at a low cost and with the least trouble, conveniences, comforts, and amenities beyond the compass of the richest and most powerful monarchs of other ages..."<sup>10</sup> And the upshot was that for the working classes of the globe—at least those touched by ships and railroads and thus by international commerce—an increasing margin between living standards and bare subsistence emerged. All around the world over 1870-1914 there were five people where there had been four a generation before—half a century thus saw more population growth than had 400 years of the Han and Roman empires of earlier millennia. Underpinning this growth in human numbers were women who were better nourished and so could reliably ovulate, children who were better nourished so that their immune systems were less compromised, and the beginnings of effective public health.

## **3.2: The ca.-1870 Disjunction Between Production and Distribution**

In the world as it stood in 1870 there was seen to be a huge disjunction between the growing effective economic power of the human race and the proper distribution of this potential wealth to create a prosperous and happy society. That science,

technology, and organization could wreak miracles had become commonplaces. Best friends Karl Marx and Friedrich Engels probably put it best in 1848:

The business class,<sup>11</sup> during... scarce 100 years, has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature's forces to [hu]man[ity], machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground—what earlier century had even a presentiment that such productive forces slumbered in the lap of social labour?...<sup>12</sup>

However, the benefits of greater human power to harvest fruits from nature and organize persons did not trickle down.

There were, broadly speaking, as of 1870 three views about why it did not trickle down and what, if anything, ought to be done about it:

We have already noted John Stuart Mill's view: The problem was the Malthusian one—that people, especially “the unproductive”, had too much freedom to have children and to draw on the public for support. The solution was to “the increase of mankind shall be under the deliberate guidance of judicious fore sight.... The state... provid[ing] that no person shall be born without its consent...” and to provide unemployed workers' prisons for those bankrupt and broke: “support... accompanied with... restraints on their freedom... restricted indulgence, and enforced rigidity of discipline...”

Opposed to this was Karl Marx's view<sup>13</sup>: that the problem late not in human nature but in human societal arrangements. What was needed was to realize the German-style idealist philosophical understanding of human liberation that would be attainable with the broad prosperity from a society run on British-style classical-political economy Ricardian-socialist lines brought into being by a French-style political revolutionary overthrow of the old régime. And, Marx believed, the Logic of History would get us there. First, the market economy run for the interest of a business class that also controlled the levers of normal politics would see the economy become more productive and productive capital grow, and:

extends the division of labour...the application of machinery... the more do... wages shrink.... Small businessmen and... people living upon... interest... [are] precipitated into the... working class.... Thus the forest of outstretched arms begging for work, grows ever thicker and thicker, while the arms themselves grow

ever leaner and leaner...<sup>14</sup>

And this would, Marx believed, inevitably trigger a political-societal reaction:

Further socialisation of labour... takes a new form.... One capitalist always kills many. Hand in hand with this... develop... the cooperative... labour process, the conscious technical application of science, the methodical cultivation of the soil, the transformation of the instruments of labour into instruments of labour only usable in common.... Along with the constantly diminishing number of the magnates of capital... grows... misery, oppression, slavery, degradation, exploitation; but with this too grows the revolt of the working class... disciplined, united, organised by... capitalist production itself.... Centralisation of capital and socialisation of labour... become incompatible with their capitalist exterior shell. This shell is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated...<sup>15</sup>

There was a third view, however: the view that there was nothing wrong with human society as it stood toward the end of the 19th century. This was the view of, say, Herbert Spencer and his *Social Statics*—that what appeared to be the defects of society as it then stood were actually necessary forms of social discipline in order to guide the upward evolution of the human race.<sup>16</sup> Andrew Carnegie—by then no longer the hungry child of a penniless handloom weaver but a plutocratic steelmaster—put it in a nutshell in 1889:

What were... luxuries have become... necessities of life. The laborer has now more comforts than the landlord had.... The landlord has books and pictures rarer, and appointments more artistic, than the King could then obtain. The price we pay for this... is, no doubt, great.... The employer of thousands is forced into the strictest economies... [in] the rates paid to labor... friction between the employer and the employed, between capital and labor, between rich and poor.... The law of competition... is here; we cannot evade it; no substitutes for it have been found; and while the law may be sometimes hard for the individual, it is best for the race, because it insures the survival of the fittest in every department...<sup>17</sup>

The theorists of the 18th Century Enlightenment had rejected justifications of inequality based on the inheritance of caste—fictionalized descent from the Norman knights who had conquered England for William the Bastard in 1066 or the Frankish warriors who had conquered Gaul for King Clovis the supposed grandson of Merovech—for the equality of all before the law, and careers open to the talented. 19th Century utilitarians had argued that the distribution of even property should be calculated by a benevolent government so as to produce the

maximum sum of utility—achieve the greatest good of the greatest number. And they rejected the idea that property rights and equality under the law were in any sense sacred inasmuch as “the majestic equality of the law forbids rich and poor alike to sleep under bridges, beg in the streets and steal loaves of bread...”<sup>18</sup>

But then the pendulum swung back again. The social darwinists came up with new justifications of inequality, based on privation and poverty as Lamarckian and Darwinian sorting mechanisms that were necessary to drive the upward evolution of the human race. Hence all was for the best in this the best of all possible worlds<sup>19</sup>—and the more it appeared in the surface to be not the best, the more it was.

Few social darwinists indeed were ever willing to take their logic to the end of the streetcar line. Few were willing to conclude, with Andrew Carnegie, that although the privation of the unfit poor was useful, the luxury and the dissipation of the rich were not: once one had demonstrated one’s fitness by becoming rich the only appropriate use of wealth was to give it away to advance the public good rather than to either consume it or bequeath it, for “he who dies rich dies disgraced”.<sup>20</sup> For most the justifications were another cycle in the ideological justification that those who are rich should hold what they have: what John Kenneth Galbraith described as “the search for a superior moral justification for selfishness”.<sup>21</sup>

The contest between these three views—and diluted and blended variants of them—is a principal part of the history of political economy and economic policy. Marx’s belief that History would bring a superior social system and allow the productivity made possible by the advance of knowledge and investment to be distributed to create a truly human world is no longer credible. Mill’s fear that humanity would be unable to organize itself to master its destiny because of resource scarcity proved false with respect to population, but may prove true with respect to energy use and global warming. And there are still many—or at least a few with very loud voices—who hold that if the world of today has a problem, it is that distribution is not unequal enough.

### **3.3: The Inflection Point in Transport and Trade**

The metallurgy to cheaply make the rails and the engines of the railroad had made transport over land wherever the rails ran as cheap as travel up navigable watercourses or across the oceans had every been, and made it faster.

The mid-nineteenth century Massachusetts transcendentalist author and activist Henry David Thoreau's response to the railroad was: "get off my lawn!":<sup>22</sup>

To make a railroad round the world.... Men have an indistinct notion that if they keep up this activity of joint stocks and spades long enough all will at length ride somewhere in next to no time and for nothing, but though a crowd rushes to the depot and the conductor shouts "All aboard!" when the smoke is blown away and the vapor condensed, it will be perceived that a few are riding, but the rest are run over—and it will be called, and will be, "a melancholy accident."

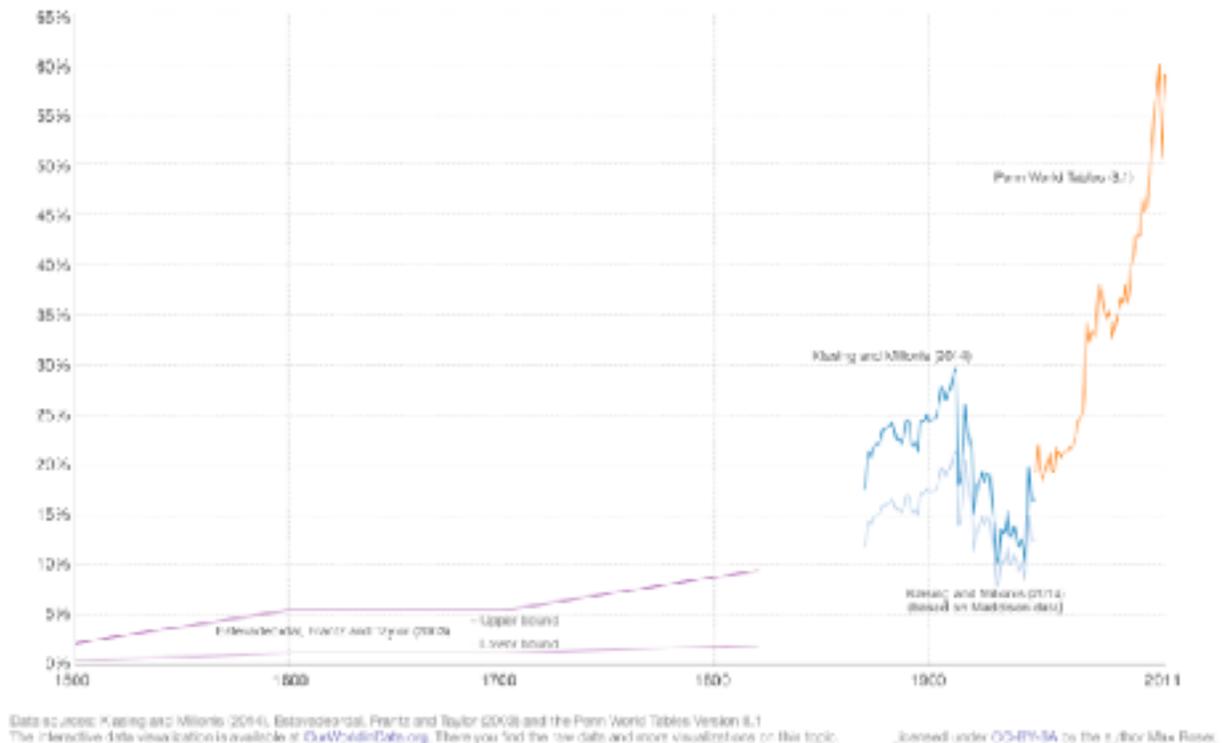
My ancestors had a very different view. The old rule-of-thumb before the railroad was that you simply could not transport agricultural goods more than 100 miles by land: by that time what the horses or oxen would have eaten was as much as they could pull. Either you find a navigable watercourse—and it had better be much closer than 100 miles—or you were stuck in bare self-sufficiency, unable to buy anything made outside your local township that could not be purchased with the (low-value) spinning and weaving labor of your womenfolk. For Thoreau the fact that it took him a day to walk or ride into Boston was a benefit—part of living deliberately. But that one would seek to live deliberately above all else is the point of view of a rich guy, or at least of a guy without a family to care for.

The railroad made a big difference for all those who did not live near navigable waterways. But the true revolution in transportation—the one that mattered for nearly everyone—came not in the 1830s with the railroad, but rather later, with the iron-hulled ocean-going coal-fired steamship.

1870 saw the Harland and Wolff shipyard of Belfast in northern Ireland launch the iron-hulled (rather than wooden-hulled) steam-powered (rather than wind-powered, but it did still have masts and sails) screw-propellered (rather than paddle-wheeled) passenger steamship R.M.S. *Oceanic*. 9 days from Liverpool to New York—a journey that in 1800 would have taken more like a month. The *Oceanic*'s crew of 150 supported 1,000 third-class passengers at a cost of £3—\$15—for a third-class passenger—the same share of average earnings as £2,100 or \$3,300 today, almost a business-class transatlantic airfare, the rough equivalent of a month and a half's wages for an unskilled worker—and 150 first class passengers at £15 a head: the same share of average income then that \$17,000 would be today. Third class on the *Oceanic* cost half as much as passage a generation earlier during the Irish Potato Famine, and roughly a fourth as much as in 1800. After 1870 sending a member of a family across the ocean to work became a possibility open

to all save the very poorest of European households.

## International Trade as a Share of World Product: Estimates since 1500



The falling cost of transporting people marched alongside a falling cost of transporting goods: flour that cost 1.5 cents per pound in Chicago and 1.5 cents per pound more in London than in New York in 1840 cost only 0.5 cents per pound more after 1870—a fall in the price of carrying the raw materials for a two-pound loaf of bread across the Atlantic from 30 minutes’ worth of unskilled labor time to ten minutes’ worth. After 1870 every commodity that was neither exceptionally fragile nor spoilable could be carried from port to port across oceans for less than it cost to move it within any country.

All this mattered for two reasons. First, it meant that everywhere in the world was, as long as there were docks and railroads, cheek-by-jowl to every other place. Everyone’s opportunities and constraints, not, as before, just the consumption patterns of the elite, depended on what was going on in every other piece of the world economy. This process has propelled itself forward from 1870 to our day, with an interruption between 1914-1945, to give us a world economy today where

a lowly t-shirt and its materials will typically cross the Pacific Ocean twice and the Atlantic and Indian Oceans during its lifetime.<sup>23</sup> That meant that the logic of comparative advantage could be deployed to its limit: wherever there was a difference across two countries in the value of textiles relative to ironmongery—or any other two non-spoilable goods—there was profit to be made and societal well-being to be enhanced by exporting the good that was relatively cheap in your country and importing the good that was relatively dear.

For this logic of comparative advantage, it did not matter where the difference in relative prices came from. A country hopeless in growing food but even more hopeless in making machine tools could make itself better off by exporting food and importing machine tools. A country that was best-in-class at making automobiles but even better, in relative terms, at making airplanes could make itself better off by exporting airplanes and importing cars. Whether one's comparative advantage came from entrepreneurs who could innovate rapidly, a deeper community of engineering practice, a well-educated workforce, abundant natural resources, or just poverty that made your labor cheap, business could profit and society grow richer by expanding world trade. And once a comparative advantage was established it tended to stick for a long time. There was nothing about British-invented automated textile machinery that made it work better in Britain than elsewhere. Yet Britain's cotton textile exports rose decade after decade from 1800 to 1910, peaking at 1.1 billion pounds a year in the years before World War I.<sup>24</sup>

Second, if you could move goods you could also move and supply armies. Thus conquest, or at least invasion and devastation, became things that any European great power could undertake in nearly any corner of the world. And the European powers did. Before 1870 European imperialism was—with the very notable exception of the British Raj in India—largely a matter of ports and their hinterlands, plus settler expansion into the low-population (after the plagues and genocides, that is) Americas and Australasia. By 1914 only Morocco, Ethiopia,<sup>25</sup> Iran, Afghanistan, Nepal, Thailand, Tibet, China, and Japan had escaped European (or, in the case of Taiwan and Korea, Japanese) conquest or “protectorate”<sup>26</sup>—and Ethiopia fell to Mussolini's Italy with its airplanes and poison gas shells in 1936.

### **3.4: The Inflection Point in Communication and Knowledge Diffusion**

But what also mattered was communications. When young Anglo-Irish aristocrat-on-the-make Arthur Wellesley, the future Duke of Wellington, voyaged to India to try to make his reputation and fortune in the 1790s, it took him seven months to get from Britain to there and six months to get back.<sup>27</sup> That meant, among other things, that whatever questions, instructions, and orders the British imperial cabinet and the directors of the East India Company sought to convey to their proconsuls in India would be a year stale by the time they even reached Fort William in Calcutta, Fort St. George in Chennai, or Bombay Castle. A conversation where a single question-and-answer interchange takes a year is not a dialogue: it is, rather, two overlapping monologues. And conveying attitudes, practices, capabilities, and goals across such a gulf must be imperfect and haphazard.

Then things changed, partly because of the enormous reduction in transport costs that greatly increases the flow of people from country to country and continent to continent, but mostly because of that highest of nineteenth-century high-tech industries—the electric telegraph. Points on the globe on the network are then wired together.

Once again, the mid-nineteenth century Massachusetts transcendentalist author and activist Henry David Thoreau's response? His response to the telegraph too was: “get off my lawn!”:<sup>28</sup>

We are in great haste to construct a magnetic telegraph from Maine to Texas, but Maine and Texas, it may be, have nothing important to communicate. Either is in such a predicament as the man who was earnest to be introduced to a distinguished deaf woman, but when he was presented, and one end of her ear trumpet was put into his hand, had nothing to say. As if the main object were to talk fast and not to talk sensibly... perchance the first news that will leak through into the broad, flapping American ear will be that the Princess Adelaide has the whooping cough...

Whooping cough before modern public health and vaccinations was a vicious beast: Of the 500,000 children in any yearly age cohort in the United States in 1840, 100,000 would catch and 10,000 would die of whooping cough—a mortality rate of 10% of those infected and of 2% of the population.<sup>29</sup>

Perhaps Henry David Thoreau is making a deep point about the human urge to

form ties of affection, respect, and deference with the powerful;<sup>30</sup> about how this makes us more unequal and less free; and about the role of modern modes of communication in helping the powerful and the rich “manufacture consent”, to coin a phrase.

I doubt it.

Perhaps it is at basis a misogynistic point—that the lives of women and the children they care for are of no consequence to anyone outside their immediate family.

Perhaps it is at basis a misanthropic point—that his equipoise should not be disturbed by knowledge of potential tragedies far away.

And while Texas may not have had much important to learn from Maine, in the summer of 1860 Texas had a great deal to learn from Chicago: the Republican Party National Convention meeting at the Wigwam nominated Abraham Lincoln as its candidate for President. The chain of events thus started would kill 25,000 and maim 25,000 more of the then-100,000 white adult male Texans, and would free all 200,000 African-American enslaved Texans within five years.

Maine may not have had much important to learn from Texas, but telegraphs reporting relative prices of Grand Bank codfish in Boston, Providence, New York, and Philadelphia were of great importance to Maine fishermen setting out. Ever since the development of language one of humanity’s great powers is that our extraordinary drive to talk and gossip truly turns us into an anthology intelligence: what one of us in the group knows, if it is useful, pretty quickly becomes known by nearly everyone. The telegraph enlarges the relevant group from the village or township or guild to, potentially, the entire world. And that matters.

Spanning the world with telegraphs was difficult. Particularly difficult to build were the submarine telegraph cables. 1870 saw Isambard Kingdom Brunel’s Great Eastern—the largest ship then ever built (nothing larger was to be built until 1901)—lay the submarine telegraph cable from Yemen to Bombay, thus completing the undersea line from London. Now it did not take months for news and commands to reach around the globe from London to Bombay and back. It took only minutes. After 1870 you could find out in the morning how your investments overseas had done the previous day, and wire instructions and questions to your bankers overseas before lunch.

Science fiction writer Neal Stephenson marvels at how the trans-oceanic submarine telegraph cables were the mid-nineteenth century equivalents of the Apollo or Manhattan Project, with:<sup>31</sup>

terrifyingly high financial stakes and shockingly formidable technical challenges.... Undersea cables... became the highest of high tech.... The problem was that water, unlike air, is an electrical conductor.... Long cables act as antennae, picking up all kinds of stray currents.... In 1858... the Atlantic Telegraph Company... cable... hardly worked at all. Queen Victoria managed to send President Buchanan a celebratory message, but it took a whole day to send it. On a good day, the cable could carry something like one word per minute. This fact was generally hushed up...

The pressure was on Wildman Whitehouse... [who] convinced himself that the solution to their troubles was brute force... 5-foot-long induction coils capable of ramming 2,000 volts into the cable.... He soon managed to blast a hole through the gutta-percha somewhere between there and Newfoundland, turning the entire system into useless junk.... William Thomson had figured out... that incoming bits could be detected much faster by a more sensitive instrument.... Eight years after Whitehouse fried the first, a second transatlantic cable was built... with... mirror galvanometers at either end of it.

He bought a 126-ton schooner yacht... turned the ship into a floating luxury palace and laboratory for the invention of even more fantastically lucrative patents. He then spent the rest of his life tooling around the British Isles, Bay of Biscay, and western Mediterranean, frequently hosting Dukes and continental savants, who all commented on the nerd-lord's tendency to stop in the middle of polite conversation to scrawl out long skeins of equations on whatever piece of paper happened to be handy...

This mattered for three reasons. First, wider knowledge brought not just more information to make decisions but also improved trust and security: thus 1871 saw 34-year old American financier J. Pierpont Morgan join 45-year old Anthony Drexel in an investment banking partnership to guide and profit from the flow of investment funds from capital-rich Britain to resource- and land-abundant America. Today's J.P. Morgan Chase and Morgan Stanley are the children of that partnership. Second, ease of communication greatly aided technology transfer—the ability in one corner of the globe to use technologies and methods invented or in use elsewhere. Third, knowledge of what was going on far away allowed much greater exertion of various forms of pressure, up to and including military. Knowledge was a handmaiden of empire.

### **3.4: Trade, Communications, Development, and Empire**

How did the fact that for the first time ever the post-1870 world was a single integrated economic unit matter? It mattered because it meant that global economic development would, for the first time, be one story.

That European expansion in the sixteenth, seventeenth, and eighteenth centuries were catastrophes for the regions of west Africa that were the sources of the slave trade; for the Amerindians of the Caribbean; for the Aztecs, Incas, the mound-builders of the Mississippi valley; and for the princes of Bengal and others who found themselves competing with the British East India Company in the succession wars over the spoils of India's Moghul Empire—that is not in dispute. But how much did pre-industrial trade and plunder affect European development? That is not so clear. The extent to which the navies and trading fleets of the great European sea-borne empires of the sixteenth, seventeenth, and eighteenth centuries shaped the industrial development of western Europe has always been one of the most fiercely-debated and unsettled topics in economic history.<sup>32</sup>

But whatever their role before, there is no doubt that things were profoundly different after 1870. Then, for good and for ill, the happenings on one continent could not but substantially change people's opportunities and constraints on others. In the world between 1870-1914, the fact of economic connection meant increased diffusion of technology, increased growth of economies and populations, increased uncertainty, increased vulnerability, and increased inequality.

In 1800-1850 cost of moving flour in a boat across the Atlantic for 3000 miles was fully half as much as the cost of purchasing the flour delivered in New York. By 1850-1875 the average premium was down to 20% of so. And by 1900? Less than 5%. For London-Chicago, add the cost of moving the wheat by barge and canal or railroad from Chicago to New York to the ocean transport cost from New York to London. Even as late as 1875, moving the flour from Chicago to London adds fifty cents to every dollar that the flour was worth in Chicago. But by 1900, once again, we are talking pence. Transport costs are no longer an important piece of the cost of turning the sun, rain, and soil nutrients of the Dakotas into flour in London.

### **3.4.1: The Creation of Comparative and Imperial Advantage**

All of a sudden northwest Europe had gained an enormous trade-relevant comparative advantage in making manufactured goods. Add to this a second, complementary shock. Natural resources out on the periphery become more valuable as well: copper, coal, coffee, and all of the other mineral and agricultural products could be shipped by rail to the ports where the iron-hulled steam-powered ocean-going cargo ships lay. Lowered intercontinental ocean transport costs suddenly made it possible to take advantage of these comparative advantages through specialization as the world became covered not just with harbors and wharves and cranes and steamships but also with railroads: some 12,000 miles of railroads in Africa, 38,000 miles in Asia, and 26,000 miles in South America by 1900; some 40,000 miles of railroads in Africa, 80,000 miles in Asia, and 60,000 miles in South America by 1930.

The market economy responded. The industrializing and then industrial core specializing in the manufactures because of its superior access to industrial technologies. The periphery specializing in the primary products that its new infrastructure allowed it to export. These abilities to specialize were of great economic value. The social returns to the investments in technology and infrastructure that created this late nineteenth-century world economy were enormous. Robert Fogel calculated that the social rate of return on the Union Pacific Railroad's trans-North American tracks and vehicles was some thirty percent per year.

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 build 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. As William Ashworth points out, the rubber tree 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.

Between 1870 and 1913 exports as a share of national product doubled in India and in what was to become Indonesia, and more than tripled in China. And in Japan—forced out of two and a half centuries of Tokugawa isolationism by U.S. gunboats—exports rose from practically zero to 7 percent of national product in only two pre-World War I generations.

### **3.4.2: The Ricardian Global Economy of 1870-1914**

A sharp Ricardian division of international labor emerged. “Tropical” regions, like Malaysia, Colombia, Cuba, Brazil, or Ghana (and to some degree the U.S. south), supplied rubber, coffee, sugar, vegetable oil, cotton, and other relatively low-value agricultural products to Europe. What Arthur Lewis calls the “regions of European settlement”—the United States, Canada, Australia, New Zealand, Argentina, Chile, Uruguay, the Ukraine, and perhaps South Africa—produced and shipped staple grains, meats, and wool at vastly cheaper prices than could Europe itself. German farmers found themselves with new competitors: not just new world producers, but Russian grain shipped from Odessa. In commodity after commodity, prices drew together in the years between 1870 and 1913. In 1870 it would have cost you 60 percent more to buy wheat in Liverpool than in Chicago. By 1913 the price differential was down to 15 percent. In 1870 copper cost some 33 percent more in Philadelphia than it did in London. By 1913 the prices of copper in the two cities were almost exactly the same. Some 40% of United States exports in 1900 were food, feeds, and beverages; a further 35% were industrial supplies and materials.

Western Europe (and also the United States Northeast: industrial supplies and materials would rise to be fully half of U.S. exports by 1910) paid for its imports by exporting manufactured goods. Some 75% of Britain's exports were manufactured goods in the years before World War I. Textile exports made up half of Britain’s manufacturing exports. By 1910 exports of goods and services amounted to more than a quarter of British, and Australian, and Canadian, national product; and to perhaps a fifth of German and Italian national product. Even the enormous and largely closed economy of the United States managed to import and export roughly five percent of national product in the years before World War I.

### **3.4.3: The Spread and Non-Spread of Communications**

With the greatly increased speed of transmitting information, the greatly lowered cost of transporting people and the knowledge inside their heads, and the greatly lowered cost of transporting machines and the knowledge embodied in them, it seems as though, for the first time in history, it would be possible to apply any productive technology known to humanity in any corner of the world—if it could be made to pay, and if the proper cadre of engineers could be deployed and then replicated and expanded so that the machines kept working even after the engineers went home.

Keeping the machines working had been unachievable in the first quarter of the nineteenth century, when all of the first Khedive of Egypt Muhammed Ali's desire and will to turn Egypt into a center of textile manufacture so that his grandchildren would not be the puppets of French bankers and British proconsuls. His textile factories stopped working. And his grandson the Khedive Ismail indeed became the puppet of French bankers and British proconsuls.

But by the end of the nineteenth century there were textile factories in Mumbai, Calcutta, Shanghai, and Capetown as well as in Manchester and Brussels. The core committed resources—capital, skilled and unskilled labor, organization, and demand, the last through its need for and willingness to buy peripheral products. This had not been true before 1870, when Western Europe's staple imports were limited to cotton, tobacco, sugar, and wool—with a little palm oil, furs, hides, tea, and coffee as well: luxuries, not necessities or even conveniences. But after 1870 technology demanded oil for diesel and gasoline engines, nitrate fertilizers for fields, copper wiring, and rubber tires. And even without new technologies the much richer post-1870 North Atlantic core's demand for cocoa, tea, coffee, silk, jute, palm oil, and other tropical products skyrocketed.

As Arthur Lewis put it, the net effect of the coming of a single economic world was to enable a great many countries and regions to jump on the “escalator, taking countries to ever higher levels of output per head.” Yet Lewis judges only six countries on the escalator of modern economic growth as of 1870. Elsewhere:

countries... trace the quickening of their rates of growth to [1870].... Many [economies] had of course been in the world market long before 1870, but if we ask in how many real income per head grew by 10 percent over two decades, the answer would yield only Ceylon, starting in the 1830s, Brazil and Australia in the 1850s and Argentina in the 1860s.... The reason for this is the rapid growth of their foreign trade after 1870.... [D]istant trade depended on the great fall in transport costs that occurred after 1870. Shipping freights had been falling for a couple of decades as iron and steam replaced wood and sail, but the downturn after 1873 was spectacular.... [Moreover,] the rest of the world [outside North America and western Europe]... did not begin extensive railway building until well into the second half of the nineteenth century, when international lending for this purpose began to increase...

It is understandable that China, India, and the other regions of what would become the post-World War II third world did not produce and export the relatively high-value commodities like wheat and wool exported by temperate settler economies: agricultural productivity was too low, and climate was unfavorable. It is

understandable why—with heavy downward pressure put on wages in Malaysia, Kenya, and Colombia by migration and threatened migration from China and India—the prices of the export commodities that they did produce were and remained relatively low.

What is more puzzling is why industrialization did not spread much more rapidly to the future third world in the years before World War I.

After all, the example of the industrial core seemed easy to follow. Inventing the technologies of the original industrial revolution—steam power, spinning mills, automatic looms, iron- and steel-making, and railroad-building—had required many independent strokes of genius. But copying the technologies did not, especially when you could buy and cheaply ship industrial capital goods made in the same New and Old England machine shops that supplied the industries of England and of America.

If Ford could redesign production so that unskilled assembly line workers do what skilled craftsmen used to do, why couldn't Ford also—or someone else—redesign production so that it can be carried out by low wage Peruvians or Poles or Kenyans rather than by Americans, who even by 1914 were extraordinarily expensive labor by world standards?

One reason is added risk: political risk of all kinds tends to make investors wary of committing their money in places where it is easy to imagine political disruptions from the left or the right. Moreover, there are substantial advantages for a firm in keeping production in the industrial core, near to other machines and near other factories making similar products, where the services of specialists needed to fix the many things that can go wrong are at hand: minimum efficient scale for an industrial civilization is much, much larger than the apparent minimum efficient scale for a plant.

However we understand far too little about why the pace of technological diffusion out of the industrial core was so slow back before World War I: “peripheral” economies did such a good job at specializing in plantation agriculture for export, and yet a bad job at creating modern manufacturing industries that could turn their low relative wages into a durable source of comparative advantage.

#### **3.4.4: The Difference the First Integrated Global Economy Made**

What effect did this enormous expansion in world trade have on standards of living

across the globe?

Some believe that the post-1870 global integration of the world economy made the rich richer and the poor poorer. Others believe that the explosion in world trade lowered the returns to factors of production that were scarce and thus well-rewarded in particular regions and raised returns to factors of production that were abundant and thus low-paid.

The economic logic seems impeccable. Yes, global manufacturing became increasingly concentrated in the industrial core—the periphery did indeed “deindustrialize”, in absolute as well as relative terms. But the jobs that peripheral economies lost were not high-paid or high-productivity ones.

The limited evidence on economy-wide real wages does not suggest that workers on the labor-scarce western, peripheral side of the Atlantic lost relative to workers in labor-abundant Europe. American, Canadian, and Argentinian real urban worker wages appear to have grown at 1.0, 1.7, and 1.7 percent per year in the years leading up to 1914—compared to growth rates that averaged 0.9 percent per year in northwest Europe. Only in Australia, where real wages seemed to stagnate in the half-century before 1913, does the logic of economic theory seem to hold: only there does increased trade appear to erode the relative wages of workers in a labor-scarce economy.

Outside of the North Atlantic core, there appears to be even less reason to believe in the wage-raising impact of expanded international trade and migration in labor-abundant economies. India and China saw no increases in real wages. Countries to which workers from India and China were allowed to migrate—whether Malaysia, Kenya, or South Africa—seem to have suffered from increased potential competition, and thus with stagnant or falling real wages. The economic tide of technology was rising, and global economic integration made it a single global tide, but it did not lift many of the boats.

### **3.5: Migration and International Economic Inequality**

What did matter for inequality and upward mobility in the pre-World War I era was not trade but migration. The descendants of those who lived in Ireland at the start of the nineteenth century are, today, one of the richest groups in the world: less than half of the descendants of the Irish of 1800 live in Ireland today; instead, they are spread throughout America, Britain, and Australia, and they have prospered.

The half century before 1925 saw perhaps one hundred million people moved from one continent to another in search of a better life. About fifty million left Europe, largely eastern and southern Europe, for Australia, and the Americas. Perhaps fifty million (although we are not really sure) left China, India, and other Asian countries for destinations in the Americas, in lands surrounding the South China Sea, and in east Africa. 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.

Tension between descendants of peoples whose ancestors had resided in the areas for somewhat longer (after all, ultimately all humans are indigenous to Africa) and descendants of migrants from China and India has dominated the politics of many countries in the twentieth century. And since World War I migration has been tightly restricted by national governments, and population flows have been much smaller as proportions of the total world population.

But the roughly one hundred million migrants of 1870-1925 made up one-twelfth of the world's population in 1870. Because the migration stream contained relatively few children and few old people, the 1870-1925 intercontinental migration stream amounted to perhaps one one out of every seven people of working age.

One of the most popular causes in late nineteenth century America was the restriction of immigration from China and Japan. Railroad barons wished to continue the expansion of the Asian-born population in America. Workers and populists wanted the Chinese, Japanese, and (Asian) Indians kept out of California and on the other side of the Pacific. The 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."

By and large, the populists won. 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. Arthur Lewis believes that this redirection of the migration stream had enormous consequences for the distribution of income in the twentieth century world. Europe had escaped the Malthusian trap

of low living standards and populations high relative to agricultural resources and technology at perhaps the end of the eighteenth century. The availability of resource-rich settlement areas like Canada and Argentina with Europe-like climates provided a further boost to European living standards: industrializing European countries at the turn of the twentieth century found their land/labor and capital/labor ratios, and thus their productivity levels and living standards, rising as migrants left for America.

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 to be starvation wages.

Thus the large populations and low levels of material wealth and agricultural productivity in China and India put downward pressure on 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 little 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 far 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 cheap. And competition from the Malaysian rubber plantations pushed down wages in the Brazilian rubber plantations as well. The late nineteenth century saw living standards and wage rates become and remain low (although higher than in China and India) throughout the regions that were to come to be called the third world.

Conversely, the restriction of migration to temperate latitudes to European natives meant that the prices of temperate agricultural commodities—like wheat, beef, and wool—would be relatively high because wages had to be high enough to lure Europeans, with agricultural productivity levels three or four times those of China or India, off the farm and across the ocean. Save for cotton (grown by African-American sharecroppers living at standards closer to physical subsistence than the rest of America cared to know about or cares to remember), temperate economies simply did not produce any of the commodities that could be produced in regions open to Asian migration: they could not compete. Instead, the temperate settler economies concentrated on the resource- and technology-intensive agricultural and

mineral products that could not be produced closer to the equator.

The politically-set pattern of migration ensured that one set of countries would be relatively rich, and another set relatively poor, as of the beginning of World War I. Since 1900 destinies have diverged further. In most vicious and virtuous circles have acted to push them further toward the nearest edge of the world's relative income distribution. But some have followed aberrant and surprising trajectories through the world income distribution. The countries in the southern half of South America were first world nations in 1900. They are not so today. Japan, with in 1900 a relatively poor developing economy, is now one of the leading industrial powers.

If there had not been substantial restrictions on poor people—Asians—moving to rich countries—Europe and its overseas settler colonies—throughout the twentieth century, California would certainly be very, very different. It might have been easier for poor people to move to rich economies than it has proven to be to transfer the political institutions and economic technologies from rich to poor economies in the twentieth century. If so, the world would today be a more equal and a richer place if not for the white Australia and analogous policies of the pre-World War I era, and for the tight restrictions on all kinds of immigration imposed from the 1920's on. Alternatively, the institutions of political democracy and the capitalist economy in the rich settler countries might have collapsed under the strain of coping with more massive immigration flows, and the resulting increased degree of internal inequality—or so has always been the argument of those favoring immigration restrictions.

### **3.6: Empires, Formal and Informal**

Trade—the exchange of goods and services for goods and services, enriching both parties—and international finance—the flow back and forth of claims to ownership of private capital and government debt, with their consequent disturbances to terms of trade between country and country and between the present and the future—were not the only important elements of the pre-World War I world system. There were also empires: the greatest empires the world had ever seen; empires spanning several continents; empires that in some ways accelerated and in other ways greatly retarded humanity's slouching progress towards utopia.

When people talk about “empires”, they talk about two different processes: formal

empires of domination and of threatened domination, and informal empires of influence. There is whose are the flags that fly, signifying dominion over palm and pine. There is which nation is or is on the point of achieving a certain technological, military, commercial, and economic preeminence. The middle part of the Long 20th Century sees the very interesting supercession of Britain by the United States as the leading industrial and commercial power—but that is a story of the 1930s and thereafter, not of the years before 1914. And the end sees the beginning of what looks to become the rise of China’s hegemony.

### **3.6.1: Informal Empire and Hegemony**

When people talk about “empires”, they talk not just about formal empires of domination, but of informal empires of influence—of offers made that those subject cannot refuse, because of threats of imposing formal domination, because their other options are far worse, or because those subject fail to understand the long-term consequences of short-term benefits.

#### *3.6.1.1: Economic “Hegemony”*

Why? Because economics is mostly but not totally a positive-sum, win-win set of social institutions. The most economically-powerful nation can often exert a type of loose hegemony in at least three dimensions: If there is to be any central management of the global economy, the leading economic power must take the lead. Economic leadership usually is cultural leadership—to be at the forefront of production and exchange often makes people in other countries attempt in various ways to imitate a variety of institutions and practices. And economic leadership becomes political leadership as its citizens have more resources to trade and thus more levers to pull. All this is in addition to potential military leadership: ultimately the sinews of war are money and productive power, and ultimately political force is greatly multiplied if it has at least a potential for powerful military backing.

Certainly free trade, free capital flows, and free migration made possible by Europe’s informal imperial domination helped greatly enrich the world in the generations before World War I. And certainly those economies that received inflows of capital before World War I benefitted enormously *if they had the human, the skill, the capital, and the organizational resources to take advantage of them*. For the U.S., Canada, Australia, for Argentina, and perhaps for others like India, the availability of large amounts of capital—largely British-financed capital—to speed development of industry and infrastructure was a godsend. It allowed for

earlier construction of railroads and other infrastructure. It allowed for the more rapid development of industry.

It is not so clear that the free flow of capital was beneficial to those in the capital-exporting countries. France subsidized the pre-World War I industrialization of Czarist Russia (and the pre-World War I luxury of the court and expansion of the military) by making investments in Russian government and railroad bonds a test of one's French patriotism. A constant of French pre-World War I politics was that someday there would be another war with Germany, during which France would conquer and re-annex the provinces of Alsace and Lorraine that Germany had annexed as part of the settlement of the Franco-Prussian War of 1870-71. (And that France had taken from the feeble and oddly-named Holy Roman Empire of the German Nation as part of the settlements of the Thirty Years' War of 1618-48 and the Wars of Louis XIV of 1667-1715.) French military strategy depended on a large, active, allied Russian army in Poland threatening Berlin and forcing Germany to divide its armies while the French marched to the Rhine. Hence boosting the power of the Czar by buying Russian bonds became a test of French patriotism.

But after World War I there was no Czar ruling from Moscow. There was Lenin ruling from Petrograd—subsequently renamed Leningrad—subsequently returned to its original name of St. Petersburg. And Lenin had no interest at all in repaying creditors from whom money had been borrowed by the Czar.

British investors did better, but they still did not do very well. The year 1914 saw close to 40 percent of Britain's national capital invested overseas. No other country has ever matched Britain's high proportion of savings channeled to other countries. However, in the forty years before World War I, British investors in overseas assets earned low returns, ranging as low to perhaps 2% per year in inflation-adjusted pounds on loans to dominion governments. Such returns were far below what presumably could have earned by devoting the same resources to the expansion of domestic industry.

It is difficult to argue that Britain's savings could not have found productive uses at home, if only British firms could have been challenged appropriately and managed productively. And the difference in rates of return cannot be attributed to risk: overseas investments were in the last analysis more exposed to risk than were domestic investments.

For the Western European metropolises of informal empire, the whole thing looks

to have been nearly a wash. It gained from its ability to import the goods made abroad. Its people who emigrated to seek their fortunes gained enormously. But the fortunes that were supposed to have been made by financing the industrialization and development of the rest of the world did not materialize. And informal empire had a tendency to turn into formal empire, and formal empire turned into international conflict, and international conflict turned into World War I.

### *3.6.1.2: The Failure of Late Qing China*

Out in the periphery, the non-trade dimensions of informal empire were... far from being uniformly beneficial. The trade and communication links that knit the pre-World War I economy together provided great potential for technology transfer, the movement of resources into high-value activities, and more rapid economic growth. On the other, they raised all kinds of subtle and not-so-subtle obstacles to the path to prosperous modernity.

Consider, for example, imperial China. Imperial China was one of the few populated areas of the globe never colonized, never subjected to formal empire by Europeans. We don't count the United States west of the Appalachians: it mattered little to the Lakota, the Tlinget, and the Miwok that their Great White Father resided on the banks of the Potomac River rather than in London. Perhaps we count the Nepals, the Bhutans, the Swazilands, Lesothos, and the Botswanas and the Indian princely states that maintained protectorate status with advisors and residents rather than proconsuls. We do count Persia, the Ottoman Empire—Turkey, Arabia, the Levant, and Mesopotamia—Afghanistan, Thailand, Ethiopia (which in 1896 slaughtered an invading Italian army at the Battle of Adwa), Japan, China—and that is all. To the extent that it was formal empire through politico-military domination rather than domestic factors and the pressures of informal empire that made a big difference in the growth of international economic inequality after 1870, those five, especially China, should have done well. They didn't, or, rather, only Japan did.

China was poor and disorganized in 1870: a country where the government and the economy were in crisis. The ethnically Manchurian Qing Dynasty could not rally the country behind a slogan like “revere the emperor and resist the foreign barbarians” because the emperor and his relatives identified themselves as foreigners and were regarded by the Han elite as barbarians. And in more than two centuries of rule the Qing government of China had trained its Confucian landlord-bureaucrat-scholar aristocracy to be incapable of taking effective action, since

effective action might be directed against the Central Government Security Perimeter (which is how we ought to translate what was back then translated as “Forbidden City”).

Many western China specialists see and can almost touch an alternative history—one in which late-nineteenth century China stood up economically, politically, and organizationally. Japan, after all, won its short victorious war against Russia in 1905, negotiated as an equal with Britain and the U.S. over warship construction in 1921, and was perhaps the eighth industrial power in the world by 1929.<sup>33</sup>

We economists are much more skeptical. We note that while things like the Qing Imperial Maritime Customs Service built up in the 1860s under Robert Hart, Hart allowed no Chinese officials in it primarily because he feared he would be unable to control their corruption, given the powerful protectors in the Qing imperial court such officials would acquire. We note the corrupt and incompetent bureaucracies that failed to manage the Yellow River dikes and the Grand Canal. We note that the Qing could not get their local officials to collect the salt tax. We note that when in the mid-1880s the Qing Dynasty, having bought foreign metal-working machinery and built a navy, arsenals, and docks, thought it was strong enough to oppose the French conquest of Vietnam its fleet was destroyed in an hour: the Chinese navy lost 572 dead, while the French lost five. In 1895 the Qing Dynasty thought it was strong enough to oppose the Japanese extension of their sphere of influence to Korea. It was wrong. The Treaty of Shimonoseki added Taiwan, Korea, and southern Manchuria to Japan's sphere of influence.

In 1929 China produced 20K tons of steel—less than two ounces per person per year. It produced 400K tons of iron—that's 1.6 pounds per person per year. It mined 27M tons of coal—that's 100 pounds per person per year. Compare this to America's 700 pounds of steel per capita in 1929 or 200 pounds in 1900, or to America's 8000 pounds of coal per capita in 1929 or 5000 pounds of coal per capita in 1900.

We economists do not find it satisfactory to attribute China's stagnation through the first decade of the twentieth century a to poor choice of ministers by the “Dragon Lady”, the Dowager Empress Cixi.

Let us look at the 1877 Kaiping coal mine project Li Hongzhang—bureaucratic prime mover behind that and such other “self-strengthening efforts” as the 1878 cotton mills in Shanghai, the Tianjin arsenal, the telegraph between Tianjin and Peking, and more. Individual governors-general like Li Hongzhang who made

economic development a top priority could make some things happen—elsewhere things did not happen outside of the foreign concessions and treaty ports like Qingdao, Tientsin, Shanghai, Guangdong, and Hong Kong.

In 1877 Governor-General Li Hongzhang of Chihli joined with experienced, wealthy, Hong Kong treaty-port comprador-merchant Tang Tingshu to build a modern, industrial, large-scale coal mine in Kaiping. They faced unusual forms of opposition. A British telegraph cable of 1882 stating that mining work had been stopped because Chi Shihchang, a vice-president of the Board of Civil Offices, had declared that:

foreign mining methods angered the earth dragon... [and so] the late empress could not rest quietly in her grave.... The Governor-General has been ordered to make inquiry and report... work has partially ceased.... Either he must throw over a company... formed with his direct sanction... [and] a very large quantity of capital, or he must... declare the mines harmless with the knowledge that he will then be considered responsible for any bodily ailment or other ill which may befall the Emperor or his family...

Given the size of the imperial family and mortality in the late nineteenth century, it would be a brave bureaucrat indeed who would respond to this by certifying that there was no geomantic danger to the grave of the late empress sixty miles away from the mine works.

Li Hongzhang was brave.

Production began with the most modern machinery—for the day—in 1881 excavating coal up to 500 feet down. By 1889, 3000 workers in three shifts were producing 700 tons of coal a day using steam lifts underground coal cars on rails, and pneumatic drills. By 1900, 9000 workers were producing 200 tons a coal a day, with average pay \$6 per month and with at least some Chinese-born technical employees making \$60.<sup>34</sup> Herbert Hoover at the time was a 26 year-old expatriate mining engineer on the make. He judged that the miners were producing 1/4 of what was expected of miners in America or Australia. But the rate of production was still only six pounds a year for every person in China. And there was still no railway to Tientsin. In 1888 a railway had been built down to Taku, but Chief Engineer Claude Kinder reported:

high officials who detested the railway... foster[ed] trouble with the junk people... So great was the clamor... that the Viceroy... gave the order for the nearly completed bridge [over the Peiho River to Tientsin] to be destroyed, although

hundreds of the largest junks had already safely passed through...

The mine was both a public governmental project and a private capitalist enterprise: *shang-pan kuan-tu*: official supervision and merchant management. The mine's manager was not primarily an employee of the company's Hong Kong shareholders but an intendant in the Qing administrative bureaucracy. Thus when mine director-general Tang Tingshu died in 1892 his replacement, Chang Yenmao, was not a merchant or an industrialist or an engineer. Chang Yenmao a hereditary retainer of Prince Qun and a political fixer for the Empress Dowager Cixi.

By 1900 Chang Yenmao was perhaps wealthiest men in Tientsin. When Herbert Hoover looked at the books he reported that the 9000-worker payroll had been padded by 6000 names, and that the director of personnel doing the padding and collecting the wages had paid Chang Yenmao £10000—\$50,000—for the post.

Chang Yenmao's company paid £20000—\$100000—a year in dividends. In 1901 Herbert Hoover took over the mine, and was able to pay out £150,000—\$750,000—a year—to the shareholders as dividends.

“Herbert Hoover took over”? you say. Yes. Herbert Hoover arrived in Tientsin in 1900 just in time to be besieged in the city by the Boxer—a better translation would be the “Fighters United for Justice”—Rebellion. Mine director-general Chang Yenmao had fled to inside Tientsin, fearing rightly that the Boxers would execute him as a corrupt puppet of the European. Inside Tientsin he found that the besieged Europeans wanted to execute him for passing intelligence to the Boxers—he had, after all, tried to hedge his bets.

Somehow Hoover got Chang released from prison. Somehow Chang gave Hoover a power of attorney to reincorporate the Kaiping mine as a British-flag enterprise in London controlled completely by Herbert Hoover as the representative on the spot of the London-based majority shareholders.<sup>35</sup> The new company also had a Europeans-only club. The local British charge d'affaires on the spot was disgusted at how Hoover and company had:

made a pretty pile at the expense of the Chinese.... legally the Board of Directors were unassailable... but... morally they were in the wrong.... [Britain should not] give its countenance to a financial transaction which had fleeced Chinese shareholders... lined the pockets of an Anglo-Belgian gang...

And Chang Yenmao and his associates were

wild... [because] they thought themselves rather smarter... and got themselves fairly had by a Yankee man of straw...

named Herbert Hoover.

We can try to read Herbert Hoover's mind: Perhaps Herbert Hoover thought that the old shareholders should be grateful that Hoover and his partners had only charged them only 62.5% of the company because:

- The alternative was for the Russians to have confiscated the entire mine as war reparations, leaving old shareholders with zero.
- Chang Yenmao was a corrupt thief, untouchable because of his status in the Qing court. He was stealing from the company by padding the payroll with 6000 extra workers at \$50 a year. That's \$300,000 a year stolen. We got that back for the shareholders.
- Hoover would make the mine run productively and profitably. Chang Yenmao, neither a mining engineer nor a merchant, could not
- The old shareholders' 37.5% of the post-Hoover \$750,000 a year in dividends is about \$270,000—that is nearly three times the \$100,000 a year in dividends the old company had paid: Hoover had thus nearly tripled the value of the old stockholders' shares.

Chang Yenmao, however, viewed it differently. He had to explain to Yuan Shihkai, the new Governor-General of Chihli, that he had conspired or western sharpies had tricked him or something had happened by which what Yuan Shihkai thought was the strategic imperial government enterprise of the Kaiping mine was now the property of a British-Belgian investors' syndicate, with no interest in building China's engineering capacity or supporting its foreign policy strategy.<sup>36</sup>

As Albert Feuerwerker summed up the story:

Kaiping faltered... [like] other *kuan-tu shang-pan* enterprises.... The lack of sufficient capital and the inability to raise more from domestic sources. The... unpropitious political environment.... Little aid could be expected from the tottering Manchu regime either in the form of financial assistance to compensate for the reluctance of private investors, or protection from foreign encroachment such as eventuated in British domination of this enterprise.... The contrast with the history of early industrial efforts in Meiji Japan is a striking one...

And to these a social-economic structure that could not find and promote executives but instead replaced them with corrupt political fixers, a political-ritual culture that required that a modernizing governor focus his attention constantly on the enterprise and run interference to protect it from anti-modernizers, and an educational system that continued to turn out literati instead of engineers and thus required foreign technical personnel for everything—outside the charmed circles created by the extraterritorial foreign concessions, and to a slight degree the immediate span of control of the few modernizing governors, modern industries did not develop and modern technologies were simply not applied in late imperial China.

Visionary reforming politician Sun Yatsen had offered his services to Li Hongzhang in 1894, but Li sent him away. Sun Yatsen built up a financial and propaganda network among Chinese emigrants beyond the reach of the government. Military politicians like Yuan Shihkai came to the conclusion that working with the Manchu court was useless. At the beginning of 1912 Sun Yatsen launched his rebellion, and the Qing dynasty fell as Yuan Shihkai and his peers refused to suppress it. The six-year-old emperor abdicated. But the new Chinese republic's president was military politician Yuan Shihkai. And his authority over his peers and near peers—army commanders, provincial governors, and other would-be warlords—was nil. China descended into near-anarchy.

### *3.6.1.3: The Meiji Restoration*

The opposite of China in the pre-World War I years was Japan. In the early seventeenth century the Tokugawa clan of samurai decisively defeated its opponents at the battle of Sekigahara, and won effective control over Japan. Tokugawa Ieyasu petitioned the—secluded—Priest-Emperor to grant him the title of Shogun, the Priest-Emperor's viceroy in all civil and military matters. From its capital, Edo—now Tokyo—the Tokugawa Shogunate ruled Japan for two and a half centuries.

Early in the seventeenth century the Tokugawa Shogunate took a look to the south, at the Philippines. Only a century before, the Philippines had been independent kingdoms. Then the Europeans landed. Merchants had been followed by missionaries. Converts had proved an effective base of popular support for European influence. Missionaries had been followed by soldiers. And by 1600 Spain ruled the Philippines. The Tokugawa Shogunate was confident that it could control its potential rivals and subjects in Japan. It was not confident that it could resist the technology, military, and religious power of the Europeans. The country

was closed: trade restricted to a very small number of ships allowed access to the port of Nagasaki only, Japanese subjects returning from abroad were executed, foreigners discovered outside of their restricted zone were executed, and Christianity was suppressed. The Tokugawa Shoguns did adopt one more foreign practice: crucifixion—which they saw as a fitting punishment for those who refused to abjure the foreign religion of Christianity.

For two and a half centuries the Tokugawa ruled a largely peaceful Japan. Population grew. Rice-growing productivity increased. The arts and crafts flourished. Trade flourished. The military skills of the samurai warrior class atrophied, Japan's technology fell further and further behind that of Europe. But the country did not become a European colony.

In 1851 the President of the United States commissioned Commodore Perry to open relations with Japan. American warships enter Tokyo Bay in 1853. There argument for why the Tokugawa Shogunate should change its policy and open up trade was simple: if they did not, the U.S. fleet would burn Tokyo. The Tokugawa Shogunate submitted, and began trying to grasp how to deal with a world in which European powers would no longer permit isolation as an option.

In 1868 the Tokugawa Shogunate was overthrown by the coup termed the "Meiji restoration." Theoretically the Priest-Emperor resumed the direct rule that his ancestors had turned over to the first Shoguns more than a thousand years before—hence "restoration." In fact Japan was ruled by a shifting coalition of notables interested in absorbing European technology while maintaining Japanese civilization and independence: "western learning with Japanese spirit" in the interest of creating a "rich country with a strong army." There followed the rapid adoption of western organization: prefects, bureaucratic jobs, newspapers, an education ministry, military conscription, railways, and the Gregorian calendar were all in place by 1873. The samurai class's right to receive rents from the peasants were transformed into bonds—debt owed by the central government. Within a generation inflation had expropriated the samurai. Representative local government was in place by 1879, and a bicameral parliament (with a newly-created peerage) was in place by 1889.

Even as early as 1876 Japan was flexing its muscles as a junior colonial power by putting pressure on Korea. A successful war with China in 1895 made Korea a Japanese protectorate. In 1899 the Japanese government abolished extra-territoriality—the immunity of Europeans from Japanese justice and law. Japan allied with Britain, seeking the role of Britain's viceroy in the North Pacific, in

1902. Disputes with Russia over spheres of influence in Manchuria led to the Russo-Japanese War in 1905. The Japanese were eager to escalate to test their armed forces; the Russians were eager to escalate as well, Czarist ministers believing that a "short victorious war" would solidify support for the Czar. The Japanese won decisively, bringing Manchuria into their sphere of influence. Formal annexation of Korea followed in 1910. And Japan's declaration of war against Germany in World War I brought it rule over all Pacific islands that had been German colonies.

Ever since, politicians, economists, and pretty much everybody else have been trying to determine just what it was Japan was able to do, and why.

### **3.6.2: Formal Empire**

Europe's sixteenth century overseas empires, in Latin America, in the Philippines, and in the spice islands of Indonesia, had firm economic rationales: in the words of the chronicler of the Spanish Conquistadores, Spain's warriors conquered the New World "to spread the word of God, and to get rich." Control over the high-value low-weight luxury goods of East Asia, or over the precious metals of Latin America, could make individuals' fortunes and provide a healthy boost to any early modern European royal treasury.

Europe's seventeenth and eighteenth century overseas empires also had an economic component: obtaining a near-monopoly of the tobacco or the slave trade, or conquering the sugar-growing islands of the Caribbean, could boost mercantile prosperity.

But by the nineteenth century little was needed in the way of luxuries that could not be made more cheaply in the industrial core of the world economy, and little was to be found in raw materials from further extensions of European empires. The odds were that it would be less expensive to trade than to conquer and then extract.

Yet it was the nineteenth century saw the European great powers complete their conquest of the world. The improvements in transport and communications made war and conquest and occupation vastly easier. And proconsuls were rarely focused on just what resources would flow back to the imperial metropolis from this extension of empire, and whether it might not be cheaper in the long run to simply trade and pay for them.

In the second half of the nineteenth century it became clear that there was no part of the world in which western Europeans could not—if they wished—impose their will by armed force at moderate cost. To give just example: at the battle of Omdurman in the Sudan in 1898, 10,000 soldiers of the Mahdist Sudanese regime died; only 48 British and Egyptian soldiers died. The difference was not entirely due to superior European military technology. After all, the Mahdist regime did have machine-guns, telegraphs, and mines—all bought from European suppliers. What it did not have was the organizational capacity and discipline to make effective use of them.

The outcome was integration into the European dominated world economy, political submission—either formal or informal—to rule by European proconsuls, and what we might call “cultural contamination”: the spread of European languages and European views of life around the globe. Missionaries brought European religions. Proconsuls interested in uplift brought European-style schools. Europe-originated culture, methods of administration, science, and technology began to percolate down. Members of future peripheral elites were taught—in French—how “our ancestors the Gauls” had fought the Romans in the first century B.C. Harbors, railroads, factories, and (most important) plantations sprung up from Bali in what is now Indonesia to Accra in what is now Ghana. But very different things happening in different corners: the only constant of formal empire was that there was nothing constant. As Arthur Lewis put it in his *Growth and Fluctuations, 1870-1913*:

The imperialists tell us that the finest contribution of the core to peripheral countries was good government. The anti-imperialists argue variously that empire was in good but in due course outlived its time; that it was irrelevant to development; that it actually held back development by prohibiting certain activities or channeling them into spheres of limited potential; or that it de-developed, in the sense of actually reducing living standards or even killing people. Since colonies were governed very differently—the “colonial system” is another myth—one could nominate at least one country to fit each of these categories, from best to worst...

### 3.6.2.1: South Africa

South Africa in 1870 found itself a region that was half settler colony (like Canada or Australia) and half colonial possession (like Nigeria or India). Annexed to the British empire in the Napoleonic wars, British colonists began to arrive in the Cape Colony early in the nineteenth century. The response of the Dutch-descended Boer colonists to this growing influx of foreigners who could talk to the rulers in

London was to leave: to move north across the Orange River in 1835 to the Orange Free State and the Transvaal. But the British followed. The Xhosa, the Zulu, and other kingdoms on the ground and in the way of the British expansion put up some resistance: The Zulu kingdom even annihilated a British battalion and mauled a second, doing even better against the advance of European-derived settlers and their armies than the Lakota at the Little Bighorn.

A millennium from now, historians are likely to judge the British and Dutch-descended colonists of South Africa less harshly than they will judge the settlers of North America, of the Argentine pampas, or of Australia. They will be struck by the—relatively only—mercy shown by settlers in South Africa to the indigenous population. In North America the standard treatment of the Cherokee, the Souix, the Pequot, and many others was to expel them by force from land that white settlers might want, to concentrate them on reservations, and to give them smallpox-infected blankets. In Australia the standard treatment of the Aborigines was to massacre them. There are no survivors from the indigenous population of Tasmania. What the Boers and English colonists of South Africa did was first to fight, and then to employ the Xhosa, Zulu, Swazi, Matabele, Basuto, and others.

Serious gold was discovered in the then-independent Boer Republics in 1886. The result was a huge influx: Johannesburg grew in a few years to a city of 100,000—the largest city in Africa south of the Sahara. Railroads were built to transport gold to the coast, powerful pneumatic tools were installed to crush gold-bearing rock, a complicated high-tech advanced chemicals industry was built to extract gold from the rock, for although South African gold deposits were vast they were too low-quality for mining to be possible without the most advanced chemistry of the late nineteenth century. Gold made the interior of South Africa important to Europeans. And British officials on the spot in South Africa provoked the Boer War in 1899.

A quarter of a million British soldiers were sent to South Africa to fight 200,000 Boers. The Boers responded with guerrilla warfare. The British responded with concentration camps. Mao Zedong's maxim was that a successful guerrilla army is like a school of fish swimming in the sea of the people. The British knew how to fight such a guerrilla army: dry up the sea. The "concentrated" civilian population died of disease. The country was impoverished. But the empire marched forward. The possibility of a British defeat simply did not exist.

A peace treaty ending the war was signed in 1902, annexing the two Boer republics to the British Empire. But control over the newly-conquered South Africa by proconsuls set by London or by British-speaking colonists was relatively brief. By

1906 Boer-centered political parties had won control over the Transvaal provincial legislature. 1910 saw the establishment of the Union of South Africa as a self-governing dominion, with equality for Afrikaans and English as official languages.

### *3.6.2.2: India*

On May 20, 1498 the Portuguese caravels of Vasco da Gama sighted Calicut. Rulers of India viewed the European ships, the trade goods they brought, and the trading posts they established as assets: the European silver was welcome and could be taxed, and the merchants governed themselves and did not cause trouble. When they fought, it was against each other and at sea. When they attempted to move onto land, they found great difficulties: the Dutch attempt early in the eighteenth century to compel the Saamoothiri Raja of Calicut to trade only with the Dutch and not the French and English called forth an alliance between them and the Saamoothiri Raja. The Dutch East India concluded that although trade paid attempts to dominate pieces of India by force did not.

It wasn't until the 1750s that the British East India Company decided to act differently. In early 1756 the new Nawab of Bengal, Mîrza Mohammad Siraj ud-Dowla, borrowed some gunners and artillery pieces from the French and decided to show the British who was master of Bengal: he attacked and captured Calcutta and its Ft. St. William, expecting the subsequent peace to see gratitude toward him on behalf of the French, much higher taxes paid him by trading Europeans, and much less tax evasion via smuggling by Europeans who understood their place.

Big mistake.

The British sent 3,000 soldiers—800 British, 2200 Indian—under the command of Robert Clive north by sea from Madras to Calcutta. Siraj ud-Dowla mobilized for the battle. Clive bought off his three subordinates. And the British East India Company had acquired the taste for conquering, ruling, and taxing India rather than merely trading with it.

By 1765 the British East India Company had successfully petitioned the Moghul Emperor in Delhi to be his tax collector for Bengal and Bihar. By 1772 Calcutta was the capital of British India and Warren Hastings was its first Governor-General, and the British East India Company had entered the sweepstakes in the succession wars over the territories of the Mogul empire.

The conquests with British-trained Indian-recruited armies that made the British

the dominant power in India in the eighteenth century were carried out on a shoestring. Yet they soon became mopping-up operations: small wars against Indian powers that had no chance of assembling the resources to match the British-controlled forces in India. Each generation saw formerly independent principalities become subservient allies. Each generation saw former allies become puppets. And each generation saw former puppets become territories ruled by London. Nearly a century after Clive and Siraj ud-Dowla came the great the 1857 Sepoy Mutiny/ Indian Mutiny/Sipahi Rebellion/Great Rebellion of 1857. It was defeated. And on May 1, 1876, the British government proclaimed Queen Victoria I Hanover to be *Kaiser-i-Hind*: Empress of India.

Karl Marx back in 1853 had taken a look at the Future Results of British Rule in India. He then prophesied that the British imperial conquest of India was India's greatest short-run curse and would be its greatest long-run blessing:

England has to fulfill a double mission in India: one destructive, the other regenerating the annihilation of old Asiatic society, and the laying the material foundations of Western society in Asia.... The political unity of India... imposed by the British sword, will now be strengthened and perpetuated by the electric telegraph. The native army, organized and trained by the British drill-sergeant, [will be] the sine qua non of Indian self-emancipation.... The free press... is a new and powerful agent of reconstruction. The Zemindari and Ryotwar themselves, abominable as they are, involve two distinct forms of private property in land — the great desideratum of Asiatic society. From the Indian natives, reluctantly and sparingly educated at Calcutta... a fresh class... with the requirements for government and imbued with European science. Steam has brought India into regular and rapid communication with Europe.... The millocracy have discovered that the transformation of India into a reproductive country has become of vital importance.... They intend now drawing a net of railroads over India. And they will do it.... I know that the English millocracy intend to endow India with railways with the exclusive view of extracting at diminished expenses the cotton and other raw materials for their manufactures.... [T]he English bourgeoisie... will neither emancipate nor materially mend the social condition of the mass of the people... [but only] lay down the material premises for both. Has the bourgeoisie ever done more? Has it ever effected a progress without dragging individuals and people through blood and dirt, through misery and degradation?...

Yet as of 1914 the great economic and social changes that Karl Marx had confidently predicted sixty years before had not advanced far. The drawing of a net of railways over India? Check. The introduction to India of those industries necessary to support the railroads? Check. The spread of other branches of modern

industry across India? Not so much. The spread of modern education across India? Not so much. Improvements in agricultural productivity resulting from the creation of effective private property in land? Not at all. Overthrow of the caste system? Not at all. The overthrow of British colonialism, the restoration of self-government, and the creation of subcontinental political unity by virtue of a revolt by the British-trained army? They had come close, but only close, in 1857.

The failure of the British Raj to transform India or perhaps to transform India faster poses an enormous problem for all of us economists. We are all, even the Marxists (back when there were Marxist economists), the intellectual children of the Adam Smith who wrote:

Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things...

Under the British Raj in the late nineteenth and early twentieth centuries India had a remarkable degree of internal and external peace, a tolerable administration of justice, and easy taxes. Yet no sign of progress “to the highest degree of opulence” had occurred.

### *3.6.2.3: Egypt*

In 1863, six years before the completion of the Suez Canal, the relatively young Khedive Ismail took the throne. Ismail had been educated in France: he was open to European influences, eager to modernize his country, and eager to play the role of the open-handed Eastern ruler. He became ruler of Egypt in 1863, in the middle of the "cotton famine" created by the American Civil War and the consequent temporary disappearance of the U.S. South from the world's cotton supply. The consequence was a cotton boom everywhere else in the world: the factories of the industrial revolution needed cotton to run on, and they were willing to pay almost any price for it. Egypt grew cotton. And so for a few years it seemed as though Egypt's economic resources and wealth were growing rapidly and were inexhaustible.

In 1876 the Egyptian government declared bankruptcy,. The creditors of the Khedive became the rulers of the country. Ismail abdicated. Two financial controllers—one British, one French—were appointed with substantial control over taxes and expenditures. Their task was to make sure that Egypt was governed by Ismail's son to keep up revenue and pay off the debt. The Egyptians wondered

why they were being highly-taxed to pay off debts run up by their extravagant ex-Khedive. British troops restored order in 1882. Thereafter the khedive was a British puppet: the strategic importance of the Suez Canal for communications with India meant that British troops were to stay in Egypt on varying pretexts and for various reasons until 1956.

#### *3.6.2.4: Understanding Formal Empire*

Understanding empires has taken fourth roads. The first is typified by John Hobson, who was among the first to see empire not as an attempt to plunder but as an attempt to sell, and also to produce. Hobson saw the major economic problem is the business cycle caused by the maldistribution of income that causes mass unemployment. A government needs to keep its people working and prosperous and happy, and empire serves two goals: Equipping the military needed to maintain the empire puts people to work. And an empire is a good source of consumers for the products of domestic factories. The solution, Hobson thought, was equality at home: then there would be no need for empire.

Joseph Schumpeter took a second road. In his view, imperialism was the last gasp of military status aristocracy. Sir Whatsit and Lord Whoever and Colonel Whichway essentially function as the equivalent of today's professional athletes in making people proud of their team. It serves as the equivalent of a sports team, winning victories—as in *Mafeking Night*. The military aristocracy loves to play, and the people love to watch. Schumpeter hates this. And he thinks that it is on the way—that as people become richer and more prosperous, the bourgeois virtues will win out. And the drive for empire will die.

Both Hobson and Schumpeter fundamentally see imperialism as a con game. Empire may be worthwhile for those at the sharp edge—the Cecil Rhodeses and the Lord Lugards—and certainly for the settlers who colonize and rule or exterminate or displace the previous inhabitants. But for the people who remain behind? Almost certainly better to cultivate one's own garden and trade and grow prosperous than conquer and occupy—especially with blowback, especially with blowback with modern industrial weapons. And both Hobson and Schumpeter are confident that with sufficient equality, in Hobson's case, or sufficient prosperity, in Schumpeter's, empire would fade.

The third view was the belief that these empires were simply mistakes, the result of survival into the early twentieth century of habits of thought that had no modern, and had had no beneficial ancient, purpose.

The fourth view was that European powers had a civilizing mission. Let us give the mic to Rudyard Kipling:<sup>37</sup>

Take up the White Man's burden—Send forth the best ye breed—  
Go send your sons to exile/To serve your captives' need  
To wait in heavy harness/On fluttered folk and wild—  
Your new-caught, sullen peoples/Half devil and half child.

Take up the White Man's burden/In patience to abide  
To veil the threat of terror/And check the show of pride;  
By open speech and simple/An hundred times made plain  
To seek another's profit/And work another's gain.

Take up the White Man's burden—And reap his old reward:  
The blame of those ye better/The hate of those ye guard—  
The cry of hosts ye humour/(Ah slowly) to the light:  
"Why brought ye us from bondage/Our loved Egyptian night?"

Take up the White Man's burden—Have done with childish days—  
The lightly proffered laurel/The easy, ungrudged praise.  
Comes now, to search your manhood/Through all the thankless years,  
Cold-edged with dear-bought wisdom/The judgment of your peers!

In short: grownups civilize the world. But perhaps civilization is best spread by newspapers and books and merchants and engineers, rather than by alien proconsuls? Just a thought.<sup>38</sup>

Perhaps the saddest book on my bookshelf is Norman Angell's *The Great Illusion*.<sup>39</sup> If, Angell argued:

conquest and extension of territory is the main road of moral and material progress... then... the position of the Russian should be more desirable than that of the Hollander.... The Austrian should be better off than the Switzer.... If a nation's wealth is really subject to military confiscation, and needs the defence of military power, then the wealth of those small states should be insecure indeed—and Belgian national stocks stand 20 points higher than the German. If nations are rival units, then we should benefit by the disappearance of our rivals—and if they disappeared, something like a third of our [British] population would starve to death.... If the growing power of Russia compelled us to fight a great war in alliance with the Turk to check her "advance on India," why are we now co-operating with Russia to build railroads to India? It is such quite simple questions

as these, and the quite plain facts which underlie them which will lead to sounder conceptions in this matter on the part of the peoples...

It was, Angell rightly pointed out, much cheaper to make and trade for what you want than to build war material and then spend the blood of your people to extract it. War and empire to become rich was, Angell rightly pointed out, profoundly stupid idea in the age of destructive industrial war. War and empire to provide a greater domain for the king to rule or duchies for younger sons was, Angell thought, no longer a motive for anyone. And war and empire to make people worship God the right way was, Angell thought, another habit that humanity had outgrown.

But if any of the three understandings that empire was profitless were true, why were pressures for empire growing stronger rather than weaker as the nineteenth century turned into the twentieth?

### **3.7: “An Extraordinary Episode in the Economic Progress of Man!”**

Yet all in all it is not possible to see the 1870-1914 making of the single global economy—and society—as anything other than an extraordinary and wonderful episode in the history of humanity. Looking back from 1919 on the optimistic, economists’ world that he had thought he had lived in up until the start of World War I in August 1914, John Maynard Keynes wrote, in his Keynes-centric upper-class-focused way:

What an extraordinary episode in the economic progress of man that age was which came to an end in August, 1914!... Conveniences, comforts, and amenities beyond the compass of the richest and most powerful monarchs of other ages. The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages.... He could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate.... But, most important of all, he regarded this state of affairs as normal, certain, and permanent, except in the direction of further improvement, and any deviation

from it as aberrant, scandalous, and avoidable. The projects and politics of militarism and imperialism, of racial and cultural rivalries, of monopolies, restrictions, and exclusion, which were to play the serpent to this paradise, were little more than the amusements of his daily newspaper, and appeared to exercise almost no influence at all on the ordinary course of social and economic life, the internationalization of which was nearly complete in practice...

And for those who were not part of the British upper class, it was still the case that the world on the eve of World War I was more prosperous and less inhuman than it had ever been before.

Yet turning this potential, and to a substantial degree actual, progress into a move in the direction of utopia really did require that humanity grow up—and not in the sense of Rudyard Kipling’s “White Man’s Burden” of European proconsuls using the maxim gun to tell everybody what to do. Rather, it required what Norman Angell wanted to bring into being:

It is not we who are the “theorists”, if by “theorists” is meant the constructors of elaborate and deceptive theorems in this matter. It is our opponents, the military mystics.... What... makes these fantastic political doctrines possible... are a few false general conceptions... that nations are rival and struggling units, that military force is consequently the determining factor of their relative advantage; that enlargement of political frontiers is the supreme need, and so on. And the revision of these fundamental conceptions will... be the work of individual men. States do not think. It is the men who form the states who think....

Was humanity growing up? Rudyard Kipling did not think so. Let us give the mic again to him, writing on the occasion of Queen Victoria’s Diamond Jubilee in 1897:<sup>40</sup>

God of our fathers, known of old/Lord of our far-flung battle-line,  
Beneath whose awful Hand we hold/Dominion over palm and pine—  
Lord God of Hosts, be with us yet/Lest we forget—lest we forget!

The tumult and the shouting dies/The Captains and the Kings depart:  
Still stands Thine ancient sacrifice/An humble and a contrite heart.  
Lord God of Hosts, be with us yet/Lest we forget—lest we forget!

Far-called, our navies melt away/On dune and headland sinks the fire:  
Lo, all our pomp of yesterday/Is one with Nineveh and Tyre!  
Judge of the Nations, spare us yet/Lest we forget—lest we forget!

If, drunk with sight of power, we loose/Wild tongues that have not Thee in awe,  
Such boastings as the Gentiles use/Or lesser breeds without the Law—  
Lord God of Hosts, be with us yet/Lest we forget—lest we forget!

For heathen heart that puts her trust/In reeking tube and iron shard,  
All valiant dust that builds on dust/And guarding, calls not Thee to guard,  
For frantic boast and foolish word—Thy mercy on Thy People, Lord!

One task that Kipling is accomplishing in this poem is to reverse the European/non-European civilization/barbarism trope. In the same way as Joseph Conrad's protagonist in *Heart of Darkness* travels up the Congo River into a land that is supposed to be the *heart of darkness* and yet finds that the true heart of darkness is the heart of European colonizer Kurtz, so the "heathen heart" is he who puts his trust in modern European industrial military technology, and the "lesser breeds without the Law" are German and Russian imperial policymakers who fear God not—and whom Kipling fears that the British policymakers are becoming. Perhaps the best paraphrase of the poem is: "We here in Britain have great power; with great power comes great responsibility;<sup>41</sup> I am not sure we know that".

And if the 1870-1914 wave of imperial conquest had not taught everybody that humanity had not grown up, the start of World War I did do the teaching.

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<sup>1</sup> See **J. Bradford DeLong** (2015): *The Dire Absolute Poverty of the Globe in 1870* <[https://www.icloud.com/pages/0-ZwSif-ES3dfIBtF\\_dW\\_DBmQ](https://www.icloud.com/pages/0-ZwSif-ES3dfIBtF_dW_DBmQ)>

<sup>2</sup> **John Stuart Mill** (1871): *Principles of Political Economy: with Some of Their Applications to Social Philosophy* (7th Ed.) (New York: Prometheus Books: 1591021510) <<http://www.gutenberg.org/ebooks/30107>>, p. 516.

<sup>3</sup> Each day: 1657 calories of grain, 187 calories of beans, 34 calories of meat, 60 calories of butter, for a total of 1938 calories and 89 grams of protein; plus per year: 1.3 kg of soap, 3 meters of linen or cotton, 1.3 kg of candles, 1.3 liters of lamp oil, and 2 million BTU of fuel. See **Robert Allen**: *Global Economic History: A Very Short Introduction* (Oxford:)

<sup>4</sup> These comparisons across countries are little more than guesses, but in terms of the ability of wages to purchase the local bare-bones subsistence basket jump in London from 1.6 to 2.8, in Amsterdam from 1 to 2.5, in Leipzig from 1 to 2.2, in Beijing from 0.4 to 0.6, and in Milan from 0.4 to 0.9. (The Chinese countryside, however, sees no increase.) See **Robert C. Allen, Jean-Pascal Bassino, Debin M, a Christine Moll-Murata, and Jan Luiten van Zanden** (2005): *Wages, Prices, and Living Standards in China, Japan, and Europe, 1738-1925* <<https://www.nuffield.ox.ac.uk/users/allen/unpublished/group-1.pdf>>.

<sup>5</sup> Note that the temperate migration-receiving regions of Australasia, the southern cone of Latin America, and North America were, by and large, open only to migrants originating in Europe. This played perhaps *the* major role in making globalization over 1870-1914 a force making the world more unequal. See **W. Arthur Lewis** (1978): *The Evolution of the International Economic Order* (Princeton: Princeton University Press) <<https://books.google.com/books?id=FrNEAAAIAAJ>>.

<sup>6</sup> See **W. Arthur Lewis** (1978): *The Evolution of the International Economic Order* (Princeton: Princeton University Press) <<https://books.google.com/books?id=FrNEAAAIAAJ>>.

<sup>7</sup> **Arthur Herman** (2008): *Gandhi & Churchill: The Epic Rivalry that Destroyed an Empire and Forged Our Age* (New York: Bantam Books: 9780553804638) <<http://books.google.com/books?isbn=9780553804638>>

<sup>8</sup> **John Maynard Keynes** (1919): *The Economic Consequences of the Peace*: “Europe was so organized socially and economically as to secure the maximum accumulation of capital... Society was so framed as to throw a great part of the increased income into the control of the class least likely to consume it. The new rich of the nineteenth century... preferred the power which investment gave them to the pleasures of immediate consumption. In fact, it was precisely the inequality of the distribution of wealth which made possible those vast accumulations of fixed wealth and of capital improvements which distinguished that age from all others. Herein lay, in fact, the main justification of the Capitalist System. If the rich had spent their new wealth on their own enjoyments, the world would long ago have found such a régime intolerable. But like bees they saved and accumulated, not less to the advantage of the whole community because they themselves held narrower ends in prospect....

“This remarkable system depended for its growth on a double bluff or deception. On the one hand the laboring classes accepted from ignorance or powerlessness, or were compelled, persuaded, or cajoled by custom, convention, authority, and the well-established order of Society into accepting, a situation in which they could call their own very little of the cake.... The capitalist classes were allowed to call the best part of the cake theirs and were theoretically free to consume it, on the tacit underlying condition that they consumed very little of it.... The duty of "saving" became nine-tenths of virtue and the growth of the cake the object of true religion. There grew round the non-consumption of the cake all those instincts of puritanism which in other ages has withdrawn itself from the world and has neglected the arts of production as well as those of enjoyment. And so the cake increased... [but] the cake was... never to be consumed, neither by you nor by your children after you....

“In writing thus I do not necessarily disparage the practices of that generation. In the unconscious recesses of its being Society knew what it was about.... Society was working not for the small pleasures of to-day but for the future security and improvement of the race... If only the cake were not cut but was allowed to grow in the geometrical proportion predicted by Malthus of population, but not less true of compound interest... a day might come when there would at last be enough to go round... overwork, overcrowding, and underfeeding would have come to an end, and men, secure of the comforts and necessities of the body, could proceed to the nobler exercises of their faculties. One geometrical ratio might cancel another, and the nineteenth century was able to forget the fertility of the species in a contemplation of the dizzy virtues of compound interest...”

<sup>9</sup> **Esteban Ortiz-Ospina and Max Roser** (2017): *Our World in Data* <<https://ourworldindata.org/international-trade>>. Quoted in **J. Bradford DeLong** (2017): “When Globalization Is Public Enemy Number One”, *Milken Review* <<http://www.milkenreview.org/articles/when-globalization-is-public-enemy-number-one>>

<sup>10</sup> **John Maynard Keynes** (1919): *The Economic Consequences of the Peace* (London: Macmillan) <<http://oll.libertyfund.org/titles/keynes-the-economic-consequences-of-the-peace/simple>>

<sup>11</sup> Importing the French word “bourgeoisie” into English for this concept was a bad idea back then in 1887 when Samuel Moore and Friedrich Engels translated it from German back in 1888. It is still a bad idea now.

<sup>12</sup> **Karl Marx and Friedrich Engels** (1848): *Manifesto of the Communist Party* <<https://www.marxists.org/archive/marx/works/1848/communist-manifesto/>>

<sup>13</sup> We will discuss Marxism later on in the book. Karl Marx-the-thinker is a very different animal, and that is the subject here. The best very short summary of what Marx thought and why is—I think—mine: **J. Bradford DeLong** (2009): *Understanding Karl Marx* <[http://delong.typepad.com/20090420\\_stanford-talk\\_karl-marx.pdf](http://delong.typepad.com/20090420_stanford-talk_karl-marx.pdf)>. The best biography of Karl-Marx-the-person—a very different animal from Karl-Marx-the-idol—is, I think, **Jonathan Sperber** (2013): *Karl Marx: A Nineteenth Century Life* (New York: W.W. Norton: 0871404672) <<http://books.google.com/books/?isbn=0871404672>>

<sup>14</sup> Karl Marx (1847): *Wage Labour and Capital* <<https://www.marxists.org/archive/marx/works/1847/wage-labour/>>

<sup>15</sup> Karl Marx (1867): *Capital* <<https://www.marxists.org/archive/marx/works/1867-c1/>>

<sup>16</sup> **Herbert Spencer** (1851): *Social Statics: Or, the Conditions Essential to Human Happiness Specified, and the First of Them Developed* (London: John Chapman) <<https://books.google.com/books/id=ph4RAAAAYAAJ>>

<sup>17</sup> **Andrew Carnegie** (1889): “Wealth”, *North American Review* 391 (June) <<http://www.bradford-delong.com/2018/02/andrew-carnegie-1889-wealth-an-historical-document.html>>

<sup>18</sup> **Anatole France** (1894): *The Red Lily* (London: J. Lane) <<https://books.google.com/books/?id=2-YLAAAAIAAJ>>

<sup>19</sup> **Voltaire** (1759): *Candide, or, All for the Best* (Paris: Lambert) <<https://www.gutenberg.org/files/19942/19942-h/19942-h.htm>>

<sup>20</sup> **Andrew Carnegie** (1889): “Wealth”, *North American Review* 391 (June) <<http://www.bradford-delong.com/2018/02/andrew-carnegie-1889-wealth-an-historical-document.html>>

<sup>21</sup> **John Kenneth Galbraith and Rupert Cornwell** (2002): “Stop the Madness”, *Toronto Globe and Mail* (July 6) <<http://wist.info/galbraith-john-kenneth/7463/>>. There are also, of course, “the tricky cases where the rightwingers happen to be on the right side because we haven't yet discovered a better form of social organisation than private property for solving several important classes of optimisation problems...” **Daniel Davies** (2003); *The Tribute Vice Pays to Virtue* <<http://blog.danieldavies.com/2003/05/tribute-that-vice-pays-to-virtue-what.html>>

A fuller expression of the point by Galbraith is:

The modern conservative is not even especially modern. He is engaged, on the contrary, in one of man's oldest, best financed, most applauded, and, on the whole, least successful exercises in moral philosophy. That is the search for a superior moral justification for selfishness. It is an exercise which always involves a certain number of internal contradictions and even a few absurdities. The conspicuously wealthy turn up urging the character-building value of privation for the poor. The man who has struck it rich in minerals, oil, or other bounties of nature is found explaining the debilitating effect of unearned income from the state. The corporate executive who is a superlative success as an organization man weighs in on the evils of bureaucracy. Federal aid to education is feared by those who live in suburbs that could easily forgo this danger, and by people whose children are in public schools. Socialized medicine is condemned by men emerging from Walter Reed Hospital. Social Security is viewed with alarm by those who have the comfortable cushion of an inherited income. Those who are immediately threatened by public efforts to meet their needs—whether widows, small farmers, hospitalized veterans, or the unemployed—are almost always oblivious to the danger...

<sup>22</sup> **Henry David Thoreau** (1854): *Walden, or, Life in the Woods* <<http://www.literaturepage.com/read/walden.html>>

<sup>23</sup> See **Pietra Rivoli** (2005): *The Travels of a T-Shirt in the Global Economy: An Economist Examines the Markets, Power, and Politics of World Trade* (New York: John Wiley: 0470456426) <<https://books.google.com/books?isbn=0470456426>>. Cotton grown in Texas, Arizona, or California shipped to South Asia for spinning, weaving, and dyeing; shipped back to America for sale and use; then shipped to Zanzibar for reuse.

<sup>24</sup> **R. Robson** (1957): *The Cotton Industry in Britain* (London: Macmillan) <<https://books.google.com/books?id=wPpgAAAAIAAJ>>

<sup>25</sup> Where the soldiers of the Negus slaughtered an invading Italian army in 1896 at the Battle of Adwa.

<sup>26</sup> For the case of today's Botswana, see **Neil Parsons** (1998): *King Khama, Emperor Joe, and the Great White Queen: Victorian Britain through African Eyes* (Chicago: University of Chicago Press: 0226647455) <<https://books.google.com/books?isbn=0226647455>>

<sup>27</sup> June 1796-February 1797, and then March-September 1805.

<sup>28</sup> **Henry David Thoreau** (1854): *Walden, or, Life in the Woods* <<http://www.literaturepage.com/read/walden.html>>

<sup>29</sup> Worldwide today we lose 300,000 children a year to whooping cough—0.3% of each cohort.

<sup>30</sup> **Adam Smith** (1759): *Theory of Moral Sentiments* (London and Edinburgh: A. Millar; A. Kincaid and J. Bell) <<http://knarf.english.upenn.edu/Smith/tmstp.html>> wrote: “A stranger to human nature... would be apt to imagine, that pain must be more agonizing, and the convulsions of death more terrible to persons of higher rank, than to those of meaner stations...” Why? Smith thought it was because:

When we consider the condition of the great, in those delusive colours in which the imagination is apt to paint it, it seems to be almost the abstract idea of a perfect and happy state. It is the very state which, in all our waking dreams and idle reveries, we had sketched out to ourselves as the final object of all our desires. We feel, therefore, a peculiar sympathy with the satisfaction of those who are in it. We favour all their inclinations, and forward all their wishes. What pity, we think, that any thing should spoil and corrupt so agreeable a situation! We could even wish them immortal; and it seems hard to us, that death should at last put an end to such perfect enjoyment. It is cruel, we think, in Nature to compel them from their exalted stations to that humble, but hospitable home, which she has provided for all her children. Great King, live for ever! is the compliment, which, after the manner of eastern adulation, we should readily make them, if experience did not teach us its absurdity. Every calamity that befalls them, every injury that is done them, excites in the breast of the spectator ten times more compassion and resentment than he would have felt, had the same things happened to other men. It is the misfortunes of Kings only which afford the proper subjects for tragedy. They resemble, in this respect, the misfortunes of lovers. Those two situations are the chief which interest us upon the theatre; because, in spite of all that reason and experience can tell us to the contrary, the prejudices of the imagination attach to these two states a happiness superior to any other. To disturb, or to put an end to such perfect enjoyment, seems to be the most atrocious of all injuries...

<sup>31</sup> **Neal Stephenson** (1996): “Mother Earth, Mother Board”, *Wired* <<https://longform.org/posts/mother-earth-mother-board>>

<sup>32</sup> In the first half of the nineteenth century trade not in luxuries but in staples had begun to shape history. Without the appetite of British and New England factories for cotton and the power to ship ginned cotton to them cheaply, the slaves of the American south in 1860 would have been what they were for George Washington in the 1790s: a quarter of your wealth that you were willing to free, at least upon your death, because it was the right thing to do. By contrast, for Jefferson Davis it wasn't his land but rather his slaves that were three-quarters of his wealth—and so the U.S. Civil War of 1861-5 came. Early-nineteenth century cotton showed what late-eighteenth century sugar had prefigured: for the first time long-distance transoceanic trade could matter not just for the consumption pattern of an elite but for an economy, a polity, and a society as a whole.

Sugar before 1800 and cotton before 1870, however, were small potatoes compared to what intercontinental trade and communications would do when canvas sails and wooden hulls were replaced by first steam-powered paddle wheels and then by screw propellers and iron hulls. The half-century after the 1861-5 U.S. Civil War saw trade allow the production of whatever was non-spoilage and going to be consumed in the Northwest European core wherever it was geographically most advantageous, and communications allowed Northwest Europeans to direct what was produced in distant corners of the globe as well as to train distant people who to use the machines that helped them produce it. Well before 1900 Europe's beef was raised in Argentina, its mutton and wool was raised in Australia, and its butter raised in New Zealand. International trans-oceanic trade was no longer limited to luxuries, rarities, drugs—tobacco and tea—and the occasional strategic, bulk, easily-shipped commodity like cotton. Instead, nearly anything could become the object of international trade.

<sup>33</sup> Jonathan Spence, for example. He sees:

Confucian statesmen whose skill, integrity, and tenacity helped suppress the rebellions... [who] showed how imaginatively the Chinese could respond... with forceful imperial leadership and a resolute Grand Council, it appeared that the Qing Dynasty might regain some of its former strength...

And he laments how due to the mischances of politics by which those he takes to have been China's equivalent of Japan's Meiji Restoration reformers lost power and influence:

forceful leadership was not forthcoming... the empress dowager Cixi... coregent... 1861-73... 1875-89... absolute political authority... 1898-1908... Cixi had clashed badly in 1869 with Prince Gong... Zeng Guofan died in 1872... Wenxiang died in 1876... Zuo Zongtang remained preoccupied with the pacification of the Muslims in [Xinjiang]... Although self-strengthening programs continued to be implemented... a disproportionate number of them were initiated by one man, Li Hongzhang...

<sup>34</sup> About four miners died each year. As Herbert Hoover (yes, that Herbert Hoover: at the time a 26 year-old mining engineer on the make, later to become the architect of food relief to Europe after World War I to prevent mass starvation, the wonder- working Commerce Secretary during the Roaring Twenties, and president during the slide into the Great Depression) reported: “The disregard for human life permits cheap mining by economy in timber [supports].... The aggrieved relatives are amply compensated by... \$30 per man.... Cases have been proved of suicide for that amount...”

<sup>35</sup> The old company had been controlled completely by Chang Yenmao in his dual status as director-general both elected by the shareholders and appointed by the governor of Chihli. Chang’s old Kaiping Mine Company had owned the mine works, had little spare cash, and had owed £250,000—\$1.25M—in bonds that paid 12% per year interest. Hoover’s new Kaiping Mine Company borrowed £500,000 at 6%, paid off the old bonds, and had £250,000 in cash to expand. Herbert Hoover, his bosses, and his friends somehow owned 62.5% of the new company, without having committed any funds to the enterprise at all, leaving the shareholders of the old company owning 37.5% of the new company. The old company had a management and advanced technical staff of 620 Chinese managers and 10 foreign-born engineers and foremen. The new company had a management and advanced technical staff of 170: 120 from china and 50 from abroad.

<sup>36</sup> Not surprisingly, Yuan Shihkai was displeased. He ordered Chang Yenmao to get the mine back for the Qing government. And so the Qing government wound up suing Herbert Hoover and company in a London court, asking that they be required to follow the “Memorandum of Understanding” Hoover had signed stating that after the change of corporate form Chang Yenmao would remain director-general of the mine “as before”. British judges in London ruled that Hoover, as a mere employee of the new shareholders, had no power to sign a memorandum giving up the shareholders’ power to choose the director-general they wanted. Later on, when Herbert Hoover launched his political career, Democratic Party operatives combed England, but found the court transcripts mysteriously missing.

<sup>37</sup> **Rudyard Kipling** (1899): *The White Man’s Burden* <<http://historymatters.gmu.edu/d/5478/>>

<sup>38</sup> George Orwell: Shooting an Elephant

<sup>39</sup> Norman Angell (1907): *The Great Illusion*

<sup>40</sup> **Rudyard Kipling** (1897): “Recessional”

<sup>41</sup> Cf.: **Stan Lee and Steve Ditko** (1962): *Spider-Man*